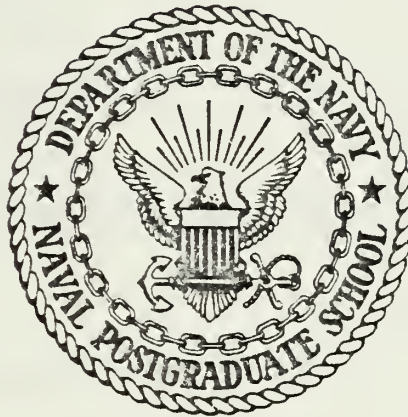


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THESIS

S-3A PILOT REDUCTION POLICY:
A MORALE AND EFFECTIVENESS STUDY

by

Mark Steven Bertsche

June 1984

Thesis Advisor:

R. A. Weitzman

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S-3A Pilot Reduction Policy: A Morale and Effectiveness
Study

by

Mark Steven Bertsche
Lieutenant Commander, United States Navy
B.S.B.A., Marquette University, 1975

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
June 1984

ABSTRACT

Since the introduction of the S-3A Viking aircraft into the U.S. Navy in the early 1970's, the number of pilots within the S-3A community has steadily decreased. Two policies were implemented to reduce the number of S-3A pilots. The intent of these policies was to improve morale and mission effectiveness. With the decrease of the number of S-3A pilots, an increase in the utilization of the naval flight officer was effected. The focus of this study is to measure the perceptions of the impact of the pilot reduction policy and calculate relevant correlations. The data used in this study is derived from the perceptions of forty S-3A pilots and forty S-3A naval flight officers from Naval Air Station Cecil Field, Florida, and Naval Air Station North Island, California. Analysis of the survey data obtained from S-3A pilots and naval flight officers indicates a perception that the implementation of a pilot reduction policy favorably impacts morale and mission effectiveness/performance. The results also support the use of the naval flight officer in the S-3A copilot position.

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I. INTRODUCTION

This study evaluates the impact of a policy decision. Problems arise and certain solutions are offered to be the correct remedy. However, following the policy implementation they are not always reviewed for effectiveness- did the policy in fact achieve the desired results?

Evaluating policies intended to improve morale might be avoided due to its subjective nature. It is the author's opinion that justifying the existence of an implemented policy is beneficial to organizational effectiveness. The policy plan should incorporate a review following implementation. As Peters states [Ref. 1: pg. 41]:

"The problem is that the planning becomes an end in itself. It goes far beyond Byrom's sensible dictum to use it to enhance mental preparedness. Instead, the plan becomes the truth, and data that don't fit the preconceived plan are denigrated or blithely ignored. Gamesmanship replaces pragmatic action."

In the U.S. Navy the S-3A Viking carrier-based aviation community suffered severe morale problems due to a perception that there were too many pilots in the S-3A community. [Ref. 3] [Ref. 4] From the period of 1974-1984 the number of pilots per crew has incrementally diminished in an effort to resolve the stated morale issue as well as several other issues. The main intent was to decrease the number of pilots in the community which has fixed number of available flight hours. This would increase the number of hours of first

pilot time to each pilot. At the introduction of the S-3A in the early 1970's, the copilot position was always occupied by a designated pilot. With fewer pilots in the community, the naval flight officer (NFO) could now occupy the copilot position of the aircraft. The pilots desired to fly only in the pilot position, logging first pilot time, and desired to fly as much as possible. Thus by reducing the number of pilots and significantly increasing the use of the NFO in the copilot position, community morale was anticipated to increase.

The purpose of this study is quite clear. Referring to the aforementioned quote by Peters, does data support the existence of this S-3A pilot reduction policy or did the policy plan become the truth?

II. PROBLEM DEFINITION

A. BACKGROUND

The U.S. Navy's S-3A Viking is tasked with the role of protecting the Battle Group from the submarine threat. A myriad of information is available to the Viking mission commander. An antisubmarine warfare (ASW) mission requires analysis of data from numerous flight and navigational systems, acoustic sensors (several different types of sonobuoys), acoustic processor, non-acoustic systems (radar, infrared, electronic surveillance measurement equipment, magnetic anomaly detectors) and data link which are filtered through each of the four crewmembers (pilot, copilot, tactical coordinator, and enlisted acoustic sensor operator). Essential information is provided to the mission commander who makes the tactical decisions. Since the internal effectiveness of the interacting S-3A Viking crewmembers is critical to the mission's effectiveness, an optimum crew complement must be attained.

Transition of the aging S-2 Tracker propeller aircraft to the S-3A Viking jet aircraft occurred in the early 1970's. Along with the transition of the S-2 to S-3A airframe came a crew manning policy for the front cockpit. The policy to use two designated pilots in the front cockpit was carried over to the S-3A Viking community from the S-2 experience.

Crew ratio reflects the number of pilots and the number of NFO's in a single crew. A pilot receives a much different basic and advanced flight training than a NFO. Pilot training is focused upon flight control of the aircraft whereas NFO training is focused upon navigation and radar operations. The officer crew composition of the S-3A was initially two pilots in the front cockpit and a NFO functioning as the tactical coordinator behind the copilot position. Since crew ratio is defined as the number of pilots and NFO's for a single crew, the initial S-3A crew ratio was 2:1 or two pilots and one NFO per crew. The number of crews per squadron is intended to fluctuate over time. Therefore, once the number of crews per squadron is determined, the number of pilots and NFO's per squadron can be calculated using the crew ratio. For example, if it was hypothetically determined that there would be ten crews per squadron, then a 2:1 crew ratio would yield an assignment of 20 pilots and 10 NFO's per squadron.

In August 1974, the Chief of Naval Operations (CNO) directed a revised officer distribution of one squadron per fleet currently transitioning from the S-2 aircraft to the S-3A aircraft [Ref. 4]. The author was unable to determine documented reasons for this directive. Likely reasons may have been cost savings (pilots are more expensive to train than NFO's) or improved retention. Despite a S-3A pilot being solo-qualified in a jet aircraft during his training

prior to pilot designation, many junior pilots spent most of their airborne time in the S-3A copilot position during their first fleet squadron tour. This caused discontent since pilots train to be solo jet pilots. Instead they functioned as a copilot. The S-3A NFO receives the same copilot training as his A-6 NFO counterparts in basic and advanced flight syllabi. The A-6 Intruder has a side by side cockpit arrangement with one pilot and one NFO. Therefore using the NFO as a copilot was not a new idea in the Navy. The CNO's directive required VS-32 (east coast) and VS-33 (west coast) to evaluate a 1.5:1.5 crew ratio [Ref. 4]. An 1.5:1.5 crew ratio may appear confusing since there are fractions to consider. Assuming a hypothetical case of ten crews per squadron, an 1.5:1.5 crew ratio would result in 15 pilots per squadron and 15 NFO's per squadron. Five of the ten crews would have pilots positioned in the copilot seat, and the remaining five crews would have NFO's in the copilot position. The term 'COTAC' was contrived to designate a NFO copilot.

VS-32 reported that the 1.5:1.5 crew ratio had "no degradation of operational readiness or mission performance by virtue of the dual-NFO manning. In fact, the evidence indicates that the contrary may be true" [Ref. 3]. In an excerpt of VS-33's evaluative report it was stated that, "The S-3A crews which have NFO's in the copilot position perform the ASW mission better because of training and

practice they receive in their dedicated positions"

[Ref. 5]. Following these favorable reports forwarded by VS-32 and VS-33, fleetwide implementation of the 1.5:1.5 crew ratio occurred in 1977.

Following the CNO's 1974 directive, concern for S-3A effectiveness and crew morale is documented [Ref. 2] [Ref. 3] [Ref. 4]. Adjustment of the crew ratio was intended to have a positive impact on the issues of effectiveness and morale. Since 1977 the crew ratio received close scrutiny and was further adjusted to affect the issues of effectiveness and morale. Even though not fully implemented, the current S-3A crew ratio is 1.33:1.67 [Ref. 6].

B. OBJECTIVES

The following is a list of objectives for this thesis study:

1. Describe the attitudes/beliefs of S-3A pilots and NFO's concerning issues related to the current pilot reduction policy.
2. Determine whether one of the intentions of the pilot reduction policy, to improve S-3A pilot and NFO morale, has been or will be forthcoming.
3. Determine whether a correlation exists between the perceptions of S-3A morale and effectiveness.

C. LITERATURE REVIEW

"The function of science ... is to establish general laws covering the behaviors of the empirical events or objects which the science in question is concerned, and thereby to enable us to connect together our knowledge of the separately known events, and to make reliable predictions of events as yet unknown." R. Braithwaite, 1955 [Ref. 7, pg. 23]

There are three purposes to this section: 1) Determine if an empirical relationship exists between job beliefs and job satisfaction, 2) determine whether an empirical relationship exists between job satisfaction and morale, and 3) determine whether an empirical relationship exists between job satisfaction and effectiveness.

1. Job Beliefs and Job Satisfaction

According to Fishbein [Ref. 8, pg. 394], "the sum of the strengths of beliefs about an attitude object is a predictor of the attitude object."

It is necessary to distinguish attitude and belief. Attitude refers to "learned predispositions to respond to an object or class of objects in a consistently favorable or unfavorable way [Ref. 8, pg. 389]. Therefore, "The jet is good," is an attitude statement. Belief is defined by Fishbein [Ref. 8, pg. 389], as a "hypothesis about an object concerning the nature of the object and its relations to other objects." The statement, "The jet won't get off the ground in this bad weather," is a belief statement. Since the relating of jets (object) is made to an ability to get off the ground (another object) it is considered a belief statement. Another dimension related to the definition of belief is the "measure of probability" concept. A statement is considered a belief if a probabilistic scale (probable-improbable, likely-unlikely, possible-impossible) can be correctly identified in a statement [Ref. 8, pg. 259].

Therefore, the belief statement, "The jet won't get off the ground in this bad weather," is further substantiated as a belief since it contains a measure of probability implication.

Russell and Farrar [Ref. 9, pg. 1247] have field-tested Fishbein's theory that the sum of job related beliefs can predict job satisfaction. In three separate cases this theory was validated. Russell and Farrar surveyed three separate samples with a questionnaire and achieved a valid prediction of job satisfaction. Their hypothesis that the sum of job related beliefs predicts the level of job satisfaction is supported by the significant correlation of $r=.46$ ($p<.001$) [Ref. 9, pg. 1250].

A significant positive relationship exists between job beliefs and job satisfaction. Being able to utilize a theory that has been successfully field-tested in three separate cases provides credibility.

2. Job Satisfaction and Morale

Does job satisfaction equate to morale? According to researchers these terms were often substituted for one another in the past. In a recent psychology text by Muchinsky [Ref. 10] a distinction is made in the definitions. In [Ref. 10, pgs. 304-305], Muchinsky defines morale as:

"The possession of a feeling, in the part of an employee, of being accepted and belonging to a group of employees through adherence to common goals and confidence in the desirability of these common goals."

Muchinsky [Ref. 10, pg. 319] defines job satisfaction as:

"The extent to which a person derives pleasure from a job."

The definitions clearly point out a difference. Morale is basically a "feeling of group-spirit" whereas job satisfaction is an "individual feeling" of the single person.

The differences are distinct; however, a correlation between morale and job satisfaction does exist. In Motowildo and Borman's study [Ref. 11], they found that morale and job satisfaction are positively correlated. As job satisfaction increases/decreases, morale increases/decreases. Therefore, it can be concluded that if high job satisfaction is predicted then a high morale can be expected.

3. Job Satisfaction and Effectiveness

Job satisfaction is defined in the previous section. In this thesis, effectiveness is considered to be an equivalent term for job performance. One important question in current literature is whether performance causes satisfaction or does satisfaction cause performance. Cases for each argument exist, but there is a lack of "strong" evidence that satisfaction causes performance. Vroom [Ref. 12] reported a median correlation of .14 in 23 separate studies which were designed to show that satisfaction causes performance. According to Muchinsky [Ref. 10, pg. 344], the controversy continues in 1983, and he feels it will not be resolved totally.

D. HYPOTHESES

The author offers three hypotheses to pursue in this thesis study. These hypotheses are personal generalizations which the author feels will be supported by the data generated through the questionnaire. Each hypothesis was made prior to the actual data gathering phase of this study and each one is related to the three study objectives listed in Chapter II (page 13).

1. The S-3A pilots and NFO's will strongly agree that the 1.33 pilot manning policy is a good change. (See Objective 1)
2. The S-3A pilots and NFO's will strongly agree that the pilot reduction policy will improve community morale. (See Objective 2)
3. A high correlation (greater than .5) exists between the perception of morale and effectiveness. (See Objective 3)

III. METHODOLOGY

The purpose of this chapter is to provide the reader with a brief description of the methodology used in this study.

The questionnaire (TABLE I) used in this study was developed in January 1984. The purpose of the questionnaire was to capture the attitudes and beliefs of a representative sample of S-3A pilots and NFO surrounding the issues related to the current 1.33 pilot per crew manning policy and to the policy itself. This questionnaire results satisfy the fulfillment of Objective 1 (page 13) and is used as a tool to generate statistical correlations in order to fulfill Objectives 2 and 3 (page 13).

A. CONDUCT OF THE STUDY

The author travelled to Naval Air Station Cecil Field, Jacksonville, Florida, and personally administered the survey questionnaires. When possible the questionnaires were administered on an individual basis. The author agreed to "a not to interfere" basis. Therefore all respondents were requested to fill out questionnaires at times when they were available and free from any operational duties. At times it was necessary to administer the questionnaire to small groups following training meetings at the end of normal working hours. Respondents from this site were attached to Wing One, the S-3A Support Unit, and four Fleet

squadrons. Two Fleet squadrons were temporarily based ashore. Several members of sea-based Fleet squadrons were located at Cecil Field for various official reasons (e.g., CAT II training) and were available to respond to this study's questionnaire. Following the completion of forty surveys at Jacksonville, Florida, the author travelled to Naval Air Station North Island, San Diego, California where forty responses were similarly collected from officers of COMASWWINGPAC Staff, VS-41 Fleet Replacement Squadron, and two Fleet squadrons. All interviews occurred late February and early March 1984.

B. THE SAMPLE

Demographic questions are included in the questionnaire in order to define the characteristics of the sample. The author had two specific desires in selecting respondents to this questionnaire. It was intentionally desired to have 1) an equal number of respondents from the East Coast and the West Coast and 2) an equal number of pilots and NFO's as respondents. Maintaining an on-going record of the respondent's designator and location (east or west coast) resulted in the actualization of these two desires. See Appendix B.

C. DESIGN OF DATA COLLECTION

In the initial design phase of the survey questionnaire, several S-3A aviators were interviewed. From these

interviews, specific areas of concern were identified and incorporated into the actual questionnaire used in this thesis study. In addition, the author was assigned to VS-32 as a NFO while the squadron was evaluating the 1.5:1.5 crew manning policy for the fleet. Possessing familiarization with the current and historical issues assisted in many aspects of this study.

The questionnaire includes demographic and attitude questions. As illustrated in TABLE I, the demographic questions are numbered 1-19 and 35. The attitude questions are numbered 20-34. Ref. 13; pp. 289, 293 defines these two general classifications of questions as follows:

Demographic questions: The basic classification variables- sex, age, marital status, race, ethnic origin, education, occupation, income, religion, and residence that characterize an individual or a household.

Attitude questions: The terms 'attitude', 'opinion', and 'belief' are not well differentiated. In general 'attitude' refers to a general orientation or a way of thinking. An attitude gives rise to many specific 'opinions', a term often used with regard to a specific issue or object. The term 'belief' is often applied to statements that have a strong normative component, particularly those having to do with religion or with moral or 'proper' behavior.

The Literature Review (Chapter II, page 13) within this study provides a discussion which differentiates the terms "belief" and "attitude."

D. INSTRUMENTATION

The Survey (TABLE I) is designed to capture responses of S-3A pilots and NFO's which reflect their perceptions of issues related to the currently implemented pilot reduction policy. It is not a modification of any off-the-shelf instrument. In fact, there is no known off-the-shelf instrument which is designed to collect attitudes/beliefs regarding the new 1.33 pilot reduction policy. The only unveiled instrument related to S-3A pilot manning issues is TABLE II. This survey was utilized by the S-3A junior officer detailee on his November 1976 visit to Naval Air Station Cecil Field, Florida.

E. ANALYSIS

1. Program

The program was written to interface with the Statistical Package for the Social Sciences [Ref. 14].

The computer program in Appendix A was written with the intent to satisfy the three stated objectives of this study (page 13). The program yields frequency tables and histograms (Appendix B) and correlations (Appendix C).

2. Likert Scaling

The Likert scale, a five point scale ranging from "strong disagreement" to "strong agreement" is used because of its compatibility to Fishbein's theory presented in the Literature Review section of this study (page 13). Fishbein presents results showing an association of the Likert scale, attitudes, and beliefs:

"... Each response is then given a score from 1 to 5, and the sum of the values is taken as the index of the respondents' attitude. The higher the sum the more favorable the attitude. Thus, once again, it can be seen that the single score that represents the respondents attitude is obtained through a consideration of his beliefs about the object." [Ref. 8, pg. 265]

Therefore the Likert scale appears to be an effective method to calculate the sum of beliefs of S-3A pilots and NFO's concerning job related beliefs. According to the Fishbein theory presented in Chapter II, the sum of beliefs concerning job related tasks can predict job satisfaction. If the Likert scale means are greater than 4, job satisfaction is high. Since [Ref. 2 and 3] sights morale as severe in 1976, a Likert scale mean of greater than 4 would demonstrate a vast improvement in the perception of morale. An improvement in morale would justify adjustments of the pilot manning policy, since an improvement in morale was a desired result of the past two changes in manning policies. Once a prediction is made, fulfillment of Objective 2 is attained.

3. Pearson's r

As stated in [Ref. 14, pg. 276], "Bivariate correlation provides a single number which summarizes the relationship between two variables." The general rule is that a correlation with a value greater than $+0.3$ or less than -0.3 is useful for analysis. Therefore, using the Pearson r will assist in reducing the number of existing relationships to only those relationships considered to be useful for further analysis. The Pearson r is a correlation which ranges in value from -1.0 to $+1.0$. A negative Pearson's r reflects an inverse relationship; as one variable increases the other variable decreases or as one variable decreases the other variable increases. A positive Pearson's r reflects a positive relationship; as one variable increases the other variable increases or as one variable decreases the other variable decreases. The Pearson's r is designed to measure the correlations between one interval level value and another interval level value [Ref. 14, pg. 28]. In this study, the Pearson's r will be used to measure correlations between the two separate interval-level values. One value is derived from responses to the survey's attitude/belief questions and the other value is derived from the responses to the survey's morale question. The use of the Pearson r will enable fulfillment of Objective 3 (page 13).

4. Eta Correlations

The Eta correlation is a numerical value ranging from 0 to +1.0. Eta does not depict whether the relationship is positive or negative. It describes the strength of association between an independent variable with a nominal value and a dependent variable with an interval-level value [Ref. 14, pg. 230]. Eta is a statistic used in this study to determine whether demographic responses (independent variables) have an association with the attitude/belief responses (dependent variables). It is designed to determine which demographic questions (such as pilot or NFO) could be associated with certain attitudes/beliefs. Use of Eta will provide a description of the pilot and NFO responses which is Objective 1 (page 13) of this study.

TABLE I

S3A Crew Morale and Effectiveness Survey

INSTRUCTIONS: The following survey pertains to the upcoming pilot per aircraft reduction in the S3A community. Although the information requested is personal, confidentiality concerning your personal identity is guaranteed. Please feel open and honest regarding your responses.

1. Designator: Pilot _____

NFO _____

2. Status: USN _____

USNR _____

3. Commission Source: USNA _____

NROTC _____

AOCS _____

NESEP _____

OCS _____

4. Rank: 01 _____

02 _____

03 _____

04 _____

05 _____

06 _____

TABLE I (cont'd)

5. Years of Service: _____
6. Years receiving flight pay: _____
7. First Pilot Flight Hours _____
8. Copilot Flight Hours _____
9. Special Crew Flight Hours _____
10. Mission Commander Hours _____
11. Number of day traps (arrested carrier landings): _____
12. Number of night traps: _____
13. Squadron location: East Coast _____
West Coast _____
14. Number of S-3A squadron tours: _____
15. Other communities which you have flown in operationally:
- VA _____
- VAW _____
- VC _____
- VF _____
- VP _____
- OTHER _____
- None _____

TABLE I (cont'd)

*****PILOT QUESTIONS*****

16. Have you ever been designated a NFO? Yes _____

No _____

N/A _____

17. Have you ever received any formal NFO training?

Yes _____

No _____

N/A _____

*****NFO QUESTIONS*****

18. Have you ever been designated a pilot? Yes _____

No _____

N/A _____

19. Have you ever received any formal pilot training?

Yes _____

No _____

N/A _____

INSTRUCTIONS: The following questions are attitude questions concerning the reduction of the number of pilots in S-3A crews. A numerical answer from the card shown to you should be given as a response. Additional comments are encouraged following your numerical response.

TABLE I (cont'd)

20. I am receptive to change in general.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

21. In an ASW mission, the NFO-designated copilot (COTAC) is an effective crewmember.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

22. The upcoming reduction of the number of pilots per crew is a good change.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

TABLE I (cont'd)

23. The upcoming reduction of the number of pilots per crew will improve crew morale.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

24. In an ASW mission, the pilot-designated copilot is an effective crewmember.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

25. The pilot-designated copilot is an effective crewmember in tasks associated with launches and recoveries.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

TABLE I (cont'd)

26. The upcoming reduction of the number of pilots per crew will improve overall effectiveness.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

27. The pilot should train in the copilot position in order to develop mission commander qualities.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

28. There are conditions when a pilot is more effective than a NFO in the copilot position.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

TABLE I (cont'd)

29. Overall the NFO is an effective copilot.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

30. S-3A crew effectiveness should be based 'solely' upon its performance during the ASW mission.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

31. The 1.33 Pilots per crew is an optimum quantity of pilots.

1	2	3	4	5
Strongly Disagree			Strongly Agree	

COMMENTS:

TABLE I (cont'd)

32. The NFO-designated copilot (COTAC) is an effective crewmember in tasks associated with launches and recoveries.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

33. Job satisfaction will increase mission effectiveness.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

34. The ratio of pilots per crew effects job satisfaction.

1	2	3	4	5

Strongly Disagree			Strongly Agree	

COMMENTS:

TABLE II
QUESTIONNAIRE SUMMARY

PILOTS

QUESTIONS	1st TOUR DEPLOY	1st TOUR* NO DEPLOY	2nd TOUR DEPLOY	2nd TOUR* NO DEPLOY
AVE FLT TIME/MO	27 hrs	22 hrs	32 hrs	24 hrs
AVE TOTAL S3 TIME	400 hrs	160 hrs	450 hrs	170 hrs
AVE TOTAL S3 TRAPS	2	0	80	0
TOO MANY OFFICERS?				
YES	99%	99%	96%	90%
NO	1%	1%	4%	10%
USE NFO CO-PILOT?				
YES	100%	100%	100%	99%
NO	0	0	0	1%
BEST PILOT/NFO MIX?				
30/15	0	2%	0	0
23/22	15%	26%	40%	80%
15/30	85%	72%	60%	20%
LEAVE NAVY AT OBLIG?				
YES	76%	42%	0	10%
NO	24%	58%	100%	90%

NFOs

AVE FLT TIME/MO	20 hrs	18 hrs	22 hrs	15 hrs
AVE TOTAL S3 TIME	250 hrs	60 hrs	280 hrs	85 hrs
AVE ASW FLT/MO	5	2	5	3
TOO MANY OFFICER?				
YES	79%	50%	78%	50%
NO	21%	50%	22%	50%
USE NFO CO-PILOT?				
YES	100%	94%	100%	100%
NO	0	6%	0	0

TABLE II (cont'd)

BEST PILOT/NFO

MIX?

30/15	0	6%	0	0
23/22	29%	34%	50%	85%
15/30	71%	60%	50%	15%

LEAVE NAVY AT OBLIG?

YES	18%	31%	0	0
NO	82%	69%	100%	100%

* These officers have only just transitioned to the S3A within the past six months.

Note: This survey is from Bureau of Naval Personnel, Aviation Distribution Control Division.

IV. RESULTS

This chapter's objective is to provide a description of the data to be analyzed in Chapter V. Table III is intended to assist the reader by listing the attitude/belief questions with their assigned question numbers. Tables IV, V, and VI use the question numbers versus the actual questions. Tables IV, V, and VI present the statistics to be analyzed in a concise and organized format. Thus, this chapter provides a brief description of Tables IV, V, and VI.

A. PERCEPTION OF MORALE AND PERCEPTION OF EFFECTIVENESS

TABLE IV (page 39) presents the data necessary to determine the strength of correlations between the perceptions of effectiveness and the perception of morale. Eight 'effectiveness-related' questions are correlated with the 'morale-related' question from this study's survey questionnaire. Pearson's r (rounded to the nearest hundredths) is used to measure the strength of correlations. These three components, effectiveness-related questions, morale question, and Pearson's r correlations, comprise TABLE IV. Pearson's r is discussed in Chapter III.

B. ATTITUDE/BELIEFS AND DEMOGRAPHICS

TABLE V (page 40) presents the data necessary for the analysis of the strengths of correlations between all the

attitude/belief questions in the survey and selected survey demographic questions. Several demographic questions were omitted from TABLE V since the author felt inclusion of these questions would not provide useful information. For example, the correlation of each of the demographic questions and whether a pilot has been designated a NFO (TABLE I, question 16) is not highly useful information. Very few respondents fell into the category of currently being a designated pilot and previously been designated a NFO. As in TABLE IV, there are three components to TABLE V: 1) Attitude/belief questions, 2) selected demographic questions and, 3) Eta correlations.

C. COMPARATIVE STRENGTH OF ATTITUDE/BELIEF MEANS

TABLE VI (page 39) is unlike TABLE IV or TABLE V. The first column of TABLE VI is a list of all the attitude/belief questions from this study's survey questionnaire. Column two lists the Likert-scale means for each of the attitude/belief questions. Rank orders of the Likert-scale means are listed in column three of TABLE VI. The attitude/belief with the highest Likert-scale mean (or the strongest agreement) is assigned a "1". The lowest Likert-scale mean having the relatively least agreement is ranked a "15". Since there are fifteen attitude/belief questions, the rank orders range from 1 to 15.

TABLE III

Question Numberings Used in Tables X, Y, & Z

Attitude/Belief Questions

- Q20: I am receptive to change in general
- *Q21: Cotac is effective in an ASW mission
- *Q22: Reduction of pilots is a good change
- Q23: Reduction of pilots will improve morale
- *Q24: Copilot is effective in an ASW mission
- *Q25: Copilot is effective in launches & recoveries
- *Q26: Pilot reduction policy will improve effectiveness
- Q27: Pilot should train in the copilot position for MC qualities.
- *Q28: Conditions exist when the pilot is more effective than NFO as Copilot
- *Q29: NFO is an effective copilot
- Q30: Effectiveness should be 'solely' based upon ASW performance
- Q31: The 1.33 pilots per crew is an optimum quantity
- *Q32: Cotac (NFO copilot) is effective in launches and recoveries
- Q33: Job satisfaction will increase mission effectiveness
- Q34: Ratio of pilots per aircraft effects job satisfaction
- Note: Questions have been shortened, refer to TABLE I (pg 25) for completely worded questions.

*denotes effectiveness questions used in TABLE X

TABLE IV

<u>Pearson's r</u>	
Selected	Morale Question
Effectiveness Questions	Q23
Q21	.097 (significance, .19)
Q22	.476 (significance, .00)
Q24	-.18 (significance, .05)
Q25	-.16 (significance, .08)
Q26	.57 (significance, .00)
Q28	.20 (significance, .04)
Q29	.12 (significance, .14)
Q32	-.03 (significance, .40)

TABLE V

ETA CORRELATION: DEMOGRAPHIC AND ATTITUDES/BELIEFS*

	<u>Q20</u>	<u>Q21</u>	<u>Q22</u>	<u>Q23</u>	<u>Q24</u>	<u>Q25</u>	<u>Q26</u>	<u>Q27</u>	<u>Q28</u>	<u>Q29</u>	<u>Q30</u>	<u>Q31</u>	<u>Q32</u>	<u>Q33</u>	<u>Q34</u>
Designator	.00	.13	.18	.25	.22	.01	.05	.03	.28	.16	.03	.11	.11	.17	.18
Rank	.13	.23	.16	.21	.23	.22	.10	.21	.28	.23	.18	.32	.31	.25	.19
Years of Service	.12	.24	.32	.38	.28	.25	.30	.32	.17	.19	.26	.22	.28	.35	.27
Mission Commander Hours	.29	.31	.31	.43	.28	.39	.28	.21	.32	.23	.35	.36	.28	.47	.49
Squadron Location	.14	.03	.13	.08	.16	.20	.27	.13	.14	.05	.17	.16	.04	.00	.20
S-3A Tours	.22	.22	.13	.07	.15	.11	.10	.15	.03	.09	.08	.15	.19	.26	.08
Sea or Shore Duty	.14	.02	.03	.12	.17	.26	.24	.18	.09	.01	.15	.00	.14	.33	.18

*Demographic questions are the independent variables.
Attitude/belief questions are the dependent variables.

TABLE VI

Comparison of Means

Attitude/Belief Question	Likert-Scale Mean	Rank Order
Q20	4.275	7
Q21	4.737	1
Q22	4.675	2
Q23	4.512	4
Q24	3.225	14
Q25	4.188	9
Q26	4.175	10
Q27	3.813	11
Q28	3.325	13
Q29	4.438	5
Q30	2.662	15
Q31	3.646	12
Q32	4.225	8
Q33	4.532	3
Q34	4.38	6

V. DISCUSSION

This chapter's objective is to describe the results of the statistical analyses (see TABLES IV, V, and VI) performed in order to derive conclusions concerning three areas of focus: 1) whether there is a meaningful relationship between the perception of morale and the perception of effectiveness in the S-3A community (pilots and NFO's), 2) the strength of correlations between the attitude/belief questions and the demographic questions, and 3) the relative-strength comparison of the Likert-scale means of attitude/belief questions.

A. PERCEPTION OF MORALE AND PERCEPTION OF EFFECTIVENESS

There are two very significant correlations (Pearson's r) apparent on TABLE IV (page 39). The most significant is the positive correlation of question 26, "The upcoming reduction of the number of pilots per crew will improve overall effectiveness." The Pearson r correlation of .57 for question 26 is the most positive correlation in this study. (Refer to Chapter III, Analysis subsection (page 23) for Pearson r explanation) Since it has a significance of .00, there is near certainty that this correlation is positive in the population sampled from. It must be kept in mind that these are the perceptions of the respondents rather than actual statements of fact. This statistical outcome

satisfies one of this study's objectives: whether there is a meaningful relationship between the perception of morale and the perception of effectiveness in the view of S-3A pilots and NFO's.

The second significant Pearson's r correlation is question 22, "The upcoming reduction of the number of pilots per crew is a good change," and question 23, "The upcoming reduction of the number of pilots per crew will improve crew morale." Even though not quite so strong as the perception of effectiveness and perception of morale, this Pearson's r correlation of .48 with a significance level of .01 is useful. Since the correlation is positive, it can be expected that as the perception of the pilot reduction policy increases, the perception of morale increases also. Favorable adjustment of the pilot manning policy should increase morale within the S-3A community of pilots and NFO's. The correlation of morale and effectiveness (.57) combined with the correlation of the pilot reduction policy and morale (.48) provides a useful "implied" correlation. If the pilot reduction policy is favorably adjusted, an increase in morale is expected. And from the .57 Pearson's r correlation, this increase in morale should increase effectiveness/performance. This increase in morale is thus expected to yield an increase in effectiveness/performance.

Analysis of the separate, narrow components of effectiveness issues (questions 21, 24, 25, 28, 29, and 32) provides

correlations of $-.3$ to $+.3$. As stated earlier in Chapter III, this particular range of correlations is not generally accepted as being useful. It is interesting to note that questions 24, 25, and 32 negatively correlate with the perception of morale. Actually question 32 is not a significant negative correlation since it is so close to zero. The strongest negative correlations are effectiveness components related to pilot-designated copilot performance. Again these are perceptions of performance, not actual performance. Question 24 is the pilot's performance in the copilot position in an ASW mission, and question 25 is the perception of his performance in the launch and recovery flight phase. The perception of his ASW performance ($-.18$) is slightly more negative than his performance in launches and recoveries ($-.16$). The author feels that the pilot being seated in the copilot position is the key factor in producing the negative correlation and not necessarily the evaluation of performance itself that produces the negative correlation. Despite the negative correlation and both questions' having a significance level under $.08$, both Pearson r 's fall within the $-.3$ to $+.3$ range. Hence, they are not strong, usable correlations. They are merely indicators and their use in policy making is not recommended.

B. DEMOGRAPHICS AND ATTITUDES/BELIEFS

This section uses the Eta statistic for correlation analysis. Eta is designed to be used in analyses where one value is nominal (demographic responses) and the other value is interval (attitude/belief responses) [Ref. 14, pg. 230]. TABLE V (page 40) provides the Eta values for each of the demographic questions on the vertical axis correlated with the attitude/belief questions on the horizontal axis. The Eta values range from 0 to 1.0 and are analyzed with the previously referred to rule of thumb--'correlations over .3 are useful for analysis'. Correlation coefficients express the "strength of association between a pair of variables" [Ref. 14, pg. 276]. Squaring the Eta factor produces a number which describes the proportional variance of the dependent variable explained by the independent variable [Ref. 14, pg. 230]. The author selected the demographic questions to be independent variables and the attitude/belief questions as the dependent variables. Certain demographic questions are not included in this analysis. These demographic questions which were determined to be meaningful indicators are included. All attitude/belief questions are used in this analysis.

In order to organize the analysis, this section's format sequentially lists the demographic (independent) variables to be analyzed.

1. Designator

None of the Eta values in the "Designator" row of TABLE V are greater than .30. Question 28, "There are conditions when a pilot is more effective than an NFO in the copilot position," has an Eta value of .28. This demographic question, designator, correlated with question 28 has the strongest correlation relative to any of the other attitude/belief questions correlated with designator. Referring to the crosstabulation table in Appendix C, 30% of the NFO's "agreed" or "strongly agreed", whereas 60% of the pilots "agreed" or "strongly agreed" to question 28. More NFO's were neutral (42.5% NFO / 27.5% pilot). And 27.5% of the NFO "disagreed" or "strongly disagreed" compared to 12.5% of the pilots. Overall, the pilots were more positive in response towards question 28. It is reasonable to expect that pilots feel more positive about their own performance as a group in comparison to NFO performance in the copilot position.

2. Rank

Question 31 and 32 have Eta values of .32 and .31 respectively.

Question 31, "The 1.33 pilots per crew ratio is an optimum quantity of pilots," provides meaningful information. The 0-5's "agreed" or "strongly agreed" less often than the junior officers (0-4's - 85%; 0-3's - 50.6%; 0-2's - 50%). None of the 0-4 respondents "disagreed" or "strongly

disagreed." During the administering of the survey questionnaire, the author received many remarks from junior officers that they desired an even lower ratio of pilots than 1.33. Some of the 0-5 respondents, current or prior S-3A Commanding Officers and current Executive Officers, were concerned about any further reduction of the 1.33 pilot per crew effort. In general, they felt that reducing the ratio further may inhibit performance of operational requirements. Question 32, "The NFO designated copilot (COTAC) is an effective crewmember in tasks associated with launches and recoveries," has an Eta value of .31. The 0-1's and 0-2's have a more positive feeling towards this question since 100% of them "agreed" or "strongly agreed." The other ranks (0-3 to 0-4) has an 80-88.9% response in the "agree" to "strongly agree" range. See Appendix C.

3. Years of Service

Questions 22, 23, 27, and 33 have useful Eta values.

Question 22 (Eta value = .32) is, "The upcoming reduction of the number of pilots per aircraft is a good change." One hundred percent of all respondents with 17-24 years of service "strongly agreed" whereas the other years of service groupings were much lower in the "strongly agree" category. (13-16 years- 46.2%, 9-12 years- 80%, 5-8 years- 76%, and 1-4 years 72.7%.) Even though the number of respondents with 17-24 years is small, 6.4% of sample size, their responses appear not to vary in response to this question.

Question 23, "The upcoming reduction of the number of pilots per crew will improve crew morale," has an Eta value of .38 and is the strongest "Years of Service" correlation. Again, 100% of the respondents with years of service from 17-24 "strongly agreed." The greatest variation in responses fell in the 13-16 years of service category. With the exception of one officer out of forty-seven officers responding in the 1-8 years of service category, all "agreed" or "strongly agreed." The more experienced (17-24 years of service) did not vary in response to question 23.

Appendix C contains the crosstabulation table for question 27, "The pilot should train in the copilot position in order to develop mission commander qualities." This question has an Eta value of .32. The table has an interesting outcome: looking at the cells in each row one can see that moving from the least years of service towards the most years of service there is less variance and the belief moves from a very broad base to a very narrow base to the right (strongly agree). Thus, the more years of service, a lesser amount of variance exists and an apparent shift to the positive exists. There is one exception to this observation: none of the respondents with 17-20 years of service "strongly agreed" to this belief question. Overall, respondents with less than 16 years of service disagree to the statement (12 out of 75 respondents with less than 16 years of service).

Question 33 has a pattern of responses that is heavier on the right (strongly agree) with respondents from the 17-24 years of service. Question 28, "Job satisfaction will increase mission effectiveness," has an Eta value of .35. (See TABLE V) With 13-16 years of service, respondents had a greater variation of opinion. Over 17 years of service, respondents (all 5) strongly agreed to the statement. Approximately 71% of all respondents "strongly agreed" to this statement.

4. Mission Commander Hours

Questions 23, 33, and 34 have Eta values of .43, .47, and .49 respectively. It is interesting to note that 76% of the respondents have 0-500 mission commander hours. Therefore, it is difficult to conclude much about the attitude/beliefs of those respondents with greater than 500 mission commander hours. None of the respondents have 3000-3501 mission commander hours.

Question 23 is, "The upcoming reduction of the number of pilots per crew will improve crew morale." Sixty-five percent of all respondents "strongly agreed," 8.8% were "neutral," and 2.5% "disagreed." Overall, this question received a very strong common agreement.

Question 33 also received responses tending to the positive side at 70.9%. This question, "Job satisfaction will increase mission effectiveness," received only one

"strongly disagree" response. (Refer to Appendix C.) The three cases with greater than 2500 mission commander hours "strongly agree." With the exception of four cases, the overall response appears to be varied in the 0-500 hours range and more narrowed to the "strongly agree" position with an increase in mission commander hours. "The ratio of pilots per crew effects job satisfaction," is question 34. With an Eta value of .49, it has the strongest Eta value of any correlation in TABLE V. Again the three cases with over 2500 mission commander hours "strongly agree" (Appendix C). Out of the 69 cases with 0-1000 mission commander hours, 61 either "agree" or "strongly agree" (approximately 88%). Opinions vary in the middle range of 1000-2000 mission commander hours; four "agree" or "strongly agree," one "neutral," one "disagree," and one "strongly disagree." Overall, very strong common agreement exists.

5. Squadron Location

No Eta correlations greater than .2 exists in the relationship of squadron location and any of the attitude/belief questions. This means there is little difference between the perceptions of the east coast respondents and the west coast respondents. Without strong independent variable variance, Eta values are low.

6. S-3A Tours

"Job satisfaction will increase mission effectiveness," is question 33 and it is the only S-3A tour correlation that comes close to an Eta value of .30. The Eta value of question 33 is .26. All five cases with three S-3A fleet tours responded with agreement or strong agreement. Respondents with two tours generally "agree" or "strongly agree" (83.3%). Also, cases with one S-3A fleet tour generally "agree" or "strongly agree" (85.7%). The only conclusion that can be made is that there is more variation of opinion amongst cases with less than three S-3A tours. It is important to recognize the very small number of cases with three S-3A tours in this sample.

7. Sea or Shore Duty

Relating this demographic question with the attitude/belief questions, only one useful correlation exists. (Refer to TABLE V) Question 33 has an Eta value of .33 which is the only useful correlation to analyze. "Job satisfaction will increase mission effectiveness" (question 33) received a more favorable response by those currently on sea duty. Ninety-three percent of the cases on sea duty either "agree" or "strongly agree," whereas seventy percent of those on shore duty "agree" or "strongly" agree.

C. COMPARISON OF ATTITUDE/BELIEF MEANS

The Likert scale ranges from 1 to 5. The value 1 depicts strong disagreement and the value 5 depicts strong agreement. These numbers can be easily converted to a scale which determines whether the attitude/belief is negative or positive. Set the Likert scale value 3 equal to 0. Any value less than 0 is considered a negative attitude/belief; any value greater than 0 is considered a positive attitude/belief. Convert the 0 value back to the original value of 3 on the Likert scale. Now an interpretation of the values in TABLE VI is formulated. That is, any Likert scale mean value in the table which is less than 3 depicts a negative attitude/ belief, and any Likert scale mean value in the table which is greater than 3 depicts a positive attitude/belief. The further the Likert scale mean value is to the left the more negative the attitude/belief. The further the Likert scale mean value is to the right the more positive the attitude/belief.

All Likert scale mean values in TABLE VI are positive with the exception of question 30, "S-3A crew effectiveness should be based "solely" on its performance during the ASW mission. The vast majority of respondents that discussed this particular question with the author or wrote down remarks concerning this question stated that they did not agree with the question since they felt that total performance should be based upon additional mission taskings and flight factors. Suggested mission factors of performance

received were mining, surface warfare, command and control, etc. Recommended flight factors of performance were boarding rates and tanking. This question derived the perception that performance should be evaluated in a much broader scope than just ASW.

Question 21, "In an ASW mission, the NFO designated copilot (COTAC) is an effective crewmember," received the most positive response (4.737) of all attitude/belief questions in this study. See TABLE VI, page 41. The response clearly indicates that the perception of the NFO's capability warrants placement in the copilot position in an ASW mission. It is interesting to compare the Likert scale mean value of question 21 to the Likert scale mean value of question 24. Question 24, "In an ASW mission, the pilot designated copilot is an effective crewmember," ranked 14 overall in strength compared with a Likert scale mean value of 3.225. There is a significant difference from the pilot/NFO mean perception of the COTAC's performance (4.737) and the copilots ASW performance (3.225).

Question 23 substantiates the change in policy in order to improve morale if the determination to change the policy could be based upon perceptions alone. Question 23, "The upcoming reduction of the number of pilots per crew will improve crew morale," was rated second overall with a Likert scale mean value of 4.512.

Question 33 states that, "Job satisfaction will increase mission effectiveness," and received a ranking of three out of fifteen, with a Likert scale mean value of 4.532. This question ties in with the discussion presented in the Literature Review chapter. A strong response is evident which may suggest a strong correlation. However, this response does not at all imply causality which was discussed in Chapter II. Likert scale means do not imply relationships.

One interesting comparison is noteworthy. Question 32, which is directed towards the performance of the NFO copilot in launches and recoveries, ranked number eight overall. Question 25, which is directed towards the performance of the pilot designated copilot in launches and recoveries, ranked number nine overall. The NFO-related question has a Likert scale mean value of 4.225 and the pilot-related question has a Likert scale mean value of 4.188. The mean values are extremely close which suggests the perception that an insignificant difference in performance exists between the NFO copilot and the pilot designated copilot.

Overall, it can be stated that the sum of all the beliefs, except question 30, are very positive. The average of all Likert scale mean values on TABLE VI is 4.05. Therefore, according to Fishbein's theory, the effect on job satisfaction should be positive. This in turn ought to have a favorable impact upon morale.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

This conclusion section will sequentially address each of the three hypotheses (page 17) introduced earlier in the thesis. The three hypotheses are directly related to each of the three objectives listed for this study.

1. The data in TABLE VI verifies the hypothesis that the S-3A pilots and NFO's strongly endorse the 1.33 pilot manning. Question 22 and 31 are the primary questions designed to measure the belief that the 1.33 pilot manning ratio is an optimum quantity of pilots. With a Likert scale mean value response of 4.675 to question 22, "The upcoming reduction of the number of pilots is a good change," it is apparent that the crewmembers are in strong agreement to the reduction of the number of pilots. This question had the second highest Likert scale mean value (TABLE VI). On the other hand, the degree of agreement to question 31, "The 1.33 pilot per crew ratio is an optimum quantity of pilots," did not receive as favorable of a response as question 22. Question 31 ranked number 12 of 15 with a Likert scale mean value of 3.646. Since the value is greater than 3.5, it can be postulated that overall the pilots and NFO's agreed with question 31, but it was not strong agreement. Therefore the crewmembers do not agree as strongly to the 1.33 quantity as to the reduction of the number of pilots in general.

2. Referring to TABLE VI, question 23, "The upcoming reduction of the number of pilots per crew will improve crew morale," supports hypothesis 2. This hypothesis states that the S-3A pilots and NFO's will strongly agree that the pilot reduction policy will improve morale. Since question 23 has a Likert scale mean value of 4.512 and ranked number 4 out of the 15 attitude/belief questions, hypothesis 2 appears to receive support based upon perceptions elicited in this study.

3. The third hypothesis, that a high correlation (over .5) exists between the intention of morale and effectiveness, receives strong support. The Pearson's r correlation (TABLE IV) which relates the perceptions of effectiveness (question 26) to morale (question 23) is .57. This Pearson's r correlation is considered useful since it is clearly greater than .3. In fact this correlation is the highest in this study and has a .01 significance level.

B. RECOMMENDATIONS

This study relies totally upon the perceptions of the S-3A pilot and NFO respondents in the sample surveyed in February and March 1984. It is recommended that the pilot reduction policy be evaluated based upon verified copilot performance rather than perceptions of performance. Actual behaviors are more reliable than perceived behaviors. Time must pass following the policy change prior to collection of

data. Therefore analyzing the policy change based upon actual performance possesses the disadvantage of a required long time duration. The benefit of using perceptions of forthcoming performance is that opinions can be quickly collected and analyzed but the detriment is that the perceptions are not as reliable as actual performance. In the case of effects of the S-3A pilot reduction policy, it is not currently feasible to use verified copilot performance in the evaluation of the pilot reduction policy. Current copilot documentation logs do not differentiate between pilot and NFO copilot performance. Since the policy is not fully implemented data is not currently available. Therefore all documents that require the logging of copilot flight hours and performance must be updated to reflect whether the copilot was a pilot or a NFO in the mission evaluated. This procedure will enable a comparison of pilot and NFO performance which can be utilized in future S-3A crew manning policy decisions. An update of the Individual Flight Activity Reporting System (IFARS) is required to reflect whether the copilot is a designated pilot or a designated NFO.

Reference 15 indicates that future changes are under consideration. Some commands, for example, are recommending greater usage of the enlisted sensor operator. A second recommendation is to utilize this study's survey questionnaire as a baseline gauge if future S-3A crew manning decisions are to be made. Prior to promulgation of a new

policy, this baseline gauge can be used to prognosticate possible effects. If policy implementation is finally determined, then a follow-up evaluation can be initiated based upon actual performance.

APPENDIX A PROGRAM FOR ANALYSES

```

1  FILE NAME
2  VARIABLE LIST
3
4  INPUT MEDIUM
5  N OF CASES
6  INPUT FORMAT
7
8  VAR LABELS
9
10  VIKING STATUS COMMSRC NAME YNRSERV YNRSFLTPY,
11  DESIGNTR SIGNAFOR/
12  COMMSRC COMMISSION SOURCE/
13  BANK BANK/
14  YNRSERV YEARS OF SERVICE/
15  YNRSFLTPY YEARS OF FLIGHT PAY/
16  P1LHRS FIRST PILOT HOURS/
17  P2LHRS SECOND PILOT HOURS/
18  P3LHRS THIRD PILOT HOURS/
19  P4LHRS FOURTH PILOT HOURS/
20  P5LHRS FIFTH PILOT HOURS/
21  P6LHRS SIXTH PILOT HOURS/
22  P7LHRS SEVENTH PILOT HOURS/
23  P8LHRS EIGHTH PILOT HOURS/
24  P9LHRS NINTH PILOT HOURS/
25  P10LHRS TENTH PILOT HOURS/
26  P11LHRS ELEVENTH PILOT HOURS/
27  P12LHRS TWELFTH PILOT HOURS/
28  P13LHRS THIRTEENTH PILOT HOURS/
29  P14LHRS FOURTEENTH PILOT HOURS/
30  P15LHRS FIFTEENTH PILOT HOURS/
31  P16LHRS SIXTEENTH PILOT HOURS/
32  P17LHRS SEVENTEENTH PILOT HOURS/
33  P18LHRS EIGHTEENTH PILOT HOURS/
34  P19LHRS NINETEENTH PILOT HOURS/
35  P20LHRS TWENTIETH PILOT HOURS/
36  P21LHRS TWENTY-FIRST PILOT HOURS/
37  P22LHRS TWENTY-SECOND PILOT HOURS/
38  P23LHRS TWENTY-THIRD PILOT HOURS/
39  P24LHRS TWENTY-FOURTH PILOT HOURS/
40  P25LHRS TWENTY-FIFTH PILOT HOURS/
41  P26LHRS TWENTY-SIXTH PILOT HOURS/
42  P27LHRS TWENTY-SEVENTH PILOT HOURS/
43  P28LHRS TWENTY-EIGHTH PILOT HOURS/
44  P29LHRS TWENTY-NINTH PILOT HOURS/
45  P30LHRS THIRTY PILOT HOURS/
46  P31LHRS THIRTY-FIRST PILOT HOURS/
47  P32LHRS THIRTY-SECOND PILOT HOURS/
48  P33LHRS THIRTY-THIRD PILOT HOURS/
49  P34LHRS THIRTY-FOURTH PILOT HOURS/
50  P35LHRS THIRTY-FIFTH PILOT HOURS/
51  P36LHRS THIRTY-SIXTH PILOT HOURS/
52  P37LHRS THIRTY-SEVENTH PILOT HOURS/
53  P38LHRS THIRTY-EIGHTH PILOT HOURS/
54  P39LHRS THIRTY-NINTH PILOT HOURS/
55  P40LHRS FORTY PILOT HOURS/
56  P41LHRS FORTY-FIRST PILOT HOURS/
57  P42LHRS FORTY-SECOND PILOT HOURS/
58  P43LHRS FORTY-THIRD PILOT HOURS/
59  P44LHRS FORTY-FOURTH PILOT HOURS/
60  P45LHRS FORTY-FIFTH PILOT HOURS/
61  P46LHRS FORTY-SIXTH PILOT HOURS/
62  P47LHRS FORTY-SEVENTH PILOT HOURS/
63  P48LHRS FORTY-EIGHTH PILOT HOURS/
64  P49LHRS FORTY-NINTH PILOT HOURS/
65  P50LHRS FIFTY PILOT HOURS/
66  P51LHRS FIFTY-FIRST PILOT HOURS/
67  P52LHRS FIFTY-SECOND PILOT HOURS/
68  P53LHRS FIFTY-THIRD PILOT HOURS/
69  P54LHRS FIFTY-FOURTH PILOT HOURS/
70  P55LHRS FIFTY-FIFTH PILOT HOURS/
71  P56LHRS FIFTY-SIXTH PILOT HOURS/
72  P57LHRS FIFTY-SEVENTH PILOT HOURS/
73  P58LHRS FIFTY-EIGHTH PILOT HOURS/
74  P59LHRS FIFTY-NINTH PILOT HOURS/
75  P60LHRS SIXTY PILOT HOURS/
76  P61LHRS SIXTY-FIRST PILOT HOURS/
77  P62LHRS SIXTY-SECOND PILOT HOURS/
78  P63LHRS SIXTY-THIRD PILOT HOURS/
79  P64LHRS SIXTY-FOURTH PILOT HOURS/
80  P65LHRS SIXTY-FIFTH PILOT HOURS/
81  P66LHRS SIXTY-SIXTH PILOT HOURS/
82  P67LHRS SIXTY-SEVENTH PILOT HOURS/
83  P68LHRS SIXTY-EIGHTH PILOT HOURS/
84  P69LHRS SIXTY-NINTH PILOT HOURS/
85  P70LHRS SEVENTY PILOT HOURS/
86  P71LHRS SEVENTY-FIRST PILOT HOURS/
87  P72LHRS SEVENTY-SECOND PILOT HOURS/
88  P73LHRS SEVENTY-THIRD PILOT HOURS/
89  P74LHRS SEVENTY-FOURTH PILOT HOURS/
90  P75LHRS SEVENTY-FIFTH PILOT HOURS/
91  P76LHRS SEVENTY-SIXTH PILOT HOURS/
92  P77LHRS SEVENTY-SEVENTH PILOT HOURS/
93  P78LHRS SEVENTY-EIGHTH PILOT HOURS/
94  P79LHRS SEVENTY-NINTH PILOT HOURS/
95  P80LHRS EIGHTY PILOT HOURS/
96  P81LHRS EIGHTY-FIRST PILOT HOURS/
97  P82LHRS EIGHTY-SECOND PILOT HOURS/
98  P83LHRS EIGHTY-THIRD PILOT HOURS/
99  P84LHRS EIGHTY-FOURTH PILOT HOURS/
100 P85LHRS EIGHTY-FIFTH PILOT HOURS/
101 P86LHRS EIGHTY-SIXTH PILOT HOURS/
102 P87LHRS EIGHTY-SEVENTH PILOT HOURS/
103 P88LHRS EIGHTY-EIGHTH PILOT HOURS/
104 P89LHRS EIGHTY-NINTH PILOT HOURS/
105 P90LHRS NINETY PILOT HOURS/
106 P91LHRS NINETY-FIRST PILOT HOURS/
107 P92LHRS NINETY-SECOND PILOT HOURS/
108 P93LHRS NINETY-THIRD PILOT HOURS/
109 P94LHRS NINETY-FOURTH PILOT HOURS/
110 P95LHRS NINETY-FIFTH PILOT HOURS/
111 P96LHRS NINETY-SIXTH PILOT HOURS/
112 P97LHRS NINETY-SEVENTH PILOT HOURS/
113 P98LHRS NINETY-EIGHTH PILOT HOURS/
114 P99LHRS NINETY-NINTH PILOT HOURS/
115 P100LHRS HUNDRED PILOT HOURS/
116 P101LHRS HUNDRED AND ONE PILOT HOURS/
117 P102LHRS HUNDRED AND TWO PILOT HOURS/
118 P103LHRS HUNDRED AND THREE PILOT HOURS/
119 P104LHRS HUNDRED AND FOUR PILOT HOURS/
120 P105LHRS HUNDRED AND FIVE PILOT HOURS/
121 P106LHRS HUNDRED AND SIX PILOT HOURS/
122 P107LHRS HUNDRED AND SEVEN PILOT HOURS/
123 P108LHRS HUNDRED AND EIGHT PILOT HOURS/
124 P109LHRS HUNDRED AND NINE PILOT HOURS/
125 P110LHRS HUNDRED AND TEN PILOT HOURS/
126 P111LHRS HUNDRED AND ELEVEN PILOT HOURS/
127 P112LHRS HUNDRED AND TWELVE PILOT HOURS/
128 P113LHRS HUNDRED AND THIRTEEN PILOT HOURS/
129 P114LHRS HUNDRED AND FOURTEEN PILOT HOURS/
130 P115LHRS HUNDRED AND FIFTEEN PILOT HOURS/
131 P116LHRS HUNDRED AND SIXTEEN PILOT HOURS/
132 P117LHRS HUNDRED AND SEVENTEEN PILOT HOURS/
133 P118LHRS HUNDRED AND EIGHTEEN PILOT HOURS/
134 P119LHRS HUNDRED AND NINETEEN PILOT HOURS/
135 P120LHRS HUNDRED AND TWENTY PILOT HOURS/
136 P121LHRS HUNDRED AND TWENTY-ONE PILOT HOURS/
137 P122LHRS HUNDRED AND TWENTY-TWO PILOT HOURS/
138 P123LHRS HUNDRED AND TWENTY-THREE PILOT HOURS/
139 P124LHRS HUNDRED AND TWENTY-FOUR PILOT HOURS/
140 P125LHRS HUNDRED AND TWENTY-FIVE PILOT HOURS/
141 P126LHRS HUNDRED AND TWENTY-SIX PILOT HOURS/
142 P127LHRS HUNDRED AND TWENTY-SEVEN PILOT HOURS/
143 P128LHRS HUNDRED AND TWENTY-EIGHT PILOT HOURS/
144 P129LHRS HUNDRED AND TWENTY-NINE PILOT HOURS/
145 P130LHRS HUNDRED AND THIRTY PILOT HOURS/
146 P131LHRS HUNDRED AND THIRTY-ONE PILOT HOURS/
147 P132LHRS HUNDRED AND THIRTY-TWO PILOT HOURS/
148 P133LHRS HUNDRED AND THIRTY-THREE PILOT HOURS/
149 P134LHRS HUNDRED AND THIRTY-FOUR PILOT HOURS/
150 P135LHRS HUNDRED AND THIRTY-FIVE PILOT HOURS/
151 P136LHRS HUNDRED AND THIRTY-SIX PILOT HOURS/
152 P137LHRS HUNDRED AND THIRTY-SEVEN PILOT HOURS/
153 P138LHRS HUNDRED AND THIRTY-EIGHT PILOT HOURS/
154 P139LHRS HUNDRED AND THIRTY-NINE PILOT HOURS/
155 P140LHRS FOUR HUNDRED AND TWENTY PILOT HOURS/
156 P141LHRS FOUR HUNDRED AND TWENTY-ONE PILOT HOURS/
157 P142LHRS FOUR HUNDRED AND TWENTY-TWO PILOT HOURS/
158 P143LHRS FOUR HUNDRED AND TWENTY-THREE PILOT HOURS/
159 P144LHRS FOUR HUNDRED AND TWENTY-FOUR PILOT HOURS/
160 P145LHRS FOUR HUNDRED AND TWENTY-FIVE PILOT HOURS/
161 P146LHRS FOUR HUNDRED AND TWENTY-SIX PILOT HOURS/
162 P147LHRS FOUR HUNDRED AND TWENTY-SEVEN PILOT HOURS/
163 P148LHRS FOUR HUNDRED AND TWENTY-EIGHT PILOT HOURS/
164 P149LHRS FOUR HUNDRED AND TWENTY-NINE PILOT HOURS/
165 P150LHRS FOUR HUNDRED AND THIRTY PILOT HOURS/
166 P151LHRS FOUR HUNDRED AND THIRTY-ONE PILOT HOURS/
167 P152LHRS FOUR HUNDRED AND THIRTY-TWO PILOT HOURS/
168 P153LHRS FOUR HUNDRED AND THIRTY-THREE PILOT HOURS/
169 P154LHRS FOUR HUNDRED AND THIRTY-FOUR PILOT HOURS/
170 P155LHRS FOUR HUNDRED AND THIRTY-FIVE PILOT HOURS/
171 P156LHRS FOUR HUNDRED AND THIRTY-SIX PILOT HOURS/
172 P157LHRS FOUR HUNDRED AND THIRTY-SEVEN PILOT HOURS/
173 P158LHRS FOUR HUNDRED AND THIRTY-EIGHT PILOT HOURS/
174 P159LHRS FOUR HUNDRED AND THIRTY-NINE PILOT HOURS/
175 P160LHRS FOUR HUNDRED AND FORTY PILOT HOURS/
176 P161LHRS FOUR HUNDRED AND FORTY-ONE PILOT HOURS/
177 P162LHRS FOUR HUNDRED AND FORTY-TWO PILOT HOURS/
178 P163LHRS FOUR HUNDRED AND FORTY-THREE PILOT HOURS/
179 P164LHRS FOUR HUNDRED AND FORTY-FOUR PILOT HOURS/
180 P165LHRS FOUR HUNDRED AND FORTY-FIVE PILOT HOURS/
181 P166LHRS FOUR HUNDRED AND FORTY-SIX PILOT HOURS/
182 P167LHRS FOUR HUNDRED AND FORTY-SEVEN PILOT HOURS/
183 P168LHRS FOUR HUNDRED AND FORTY-EIGHT PILOT HOURS/
184 P169LHRS FOUR HUNDRED AND FORTY-NINE PILOT HOURS/
185 P170LHRS FOUR HUNDRED AND FIFTY PILOT HOURS/
186 P171LHRS FOUR HUNDRED AND FIFTY-ONE PILOT HOURS/
187 P172LHRS FOUR HUNDRED AND FIFTY-TWO PILOT HOURS/
188 P173LHRS FOUR HUNDRED AND FIFTY-THREE PILOT HOURS/
189 P174LHRS FOUR HUNDRED AND FIFTY-FOUR PILOT HOURS/
190 P175LHRS FOUR HUNDRED AND FIFTY-FIVE PILOT HOURS/
191 P176LHRS FOUR HUNDRED AND FIFTY-SIX PILOT HOURS/
192 P177LHRS FOUR HUNDRED AND FIFTY-SEVEN PILOT HOURS/
193 P178LHRS FOUR HUNDRED AND FIFTY-EIGHT PILOT HOURS/
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195 P180LHRS FOUR HUNDRED AND SIXTY PILOT HOURS/
196 P181LHRS FOUR HUNDRED AND SIXTY-ONE PILOT HOURS/
197 P182LHRS FOUR HUNDRED AND SIXTY-TWO PILOT HOURS/
198 P183LHRS FOUR HUNDRED AND SIXTY-THREE PILOT HOURS/
199 P184LHRS FOUR HUNDRED AND SIXTY-FOUR PILOT HOURS/
200 P185LHRS FOUR HUNDRED AND SIXTY-FIVE PILOT HOURS/
201 P186LHRS FOUR HUNDRED AND SIXTY-SIX PILOT HOURS/
202 P187LHRS FOUR HUNDRED AND SIXTY-SEVEN PILOT HOURS/
203 P188LHRS FOUR HUNDRED AND SIXTY-EIGHT PILOT HOURS/
204 P189LHRS FOUR HUNDRED AND SIXTY-NINE PILOT HOURS/
205 P190LHRS FOUR HUNDRED AND SEVENTY PILOT HOURS/
206 P191LHRS FOUR HUNDRED AND SEVENTY-ONE PILOT HOURS/
207 P192LHRS FOUR HUNDRED AND SEVENTY-TWO PILOT HOURS/
208 P193LHRS FOUR HUNDRED AND SEVENTY-THREE PILOT HOURS/
209 P194LHRS FOUR HUNDRED AND SEVENTY-FOUR PILOT HOURS/
210 P195LHRS FOUR HUNDRED AND SEVENTY-FIVE PILOT HOURS/
211 P196LHRS FOUR HUNDRED AND SEVENTY-SIX PILOT HOURS/
212 P197LHRS FOUR HUNDRED AND SEVENTY-SEVEN PILOT HOURS/
213 P198LHRS FOUR HUNDRED AND SEVENTY-EIGHT PILOT HOURS/
214 P199LHRS FOUR HUNDRED AND SEVENTY-NINE PILOT HOURS/
215 P200LHRS FOUR HUNDRED AND EIGHTY PILOT HOURS/
216 P201LHRS FOUR HUNDRED AND EIGHTY-ONE PILOT HOURS/
217 P202LHRS FOUR HUNDRED AND EIGHTY-TWO PILOT HOURS/
218 P203LHRS FOUR HUNDRED AND EIGHTY-THREE PILOT HOURS/
219 P204LHRS FOUR HUNDRED AND EIGHTY-FOUR PILOT HOURS/
220 P205LHRS FOUR HUNDRED AND EIGHTY-FIVE PILOT HOURS/
221 P206LHRS FOUR HUNDRED AND EIGHTY-SIX PILOT HOURS/
222 P207LHRS FOUR HUNDRED AND EIGHTY-SEVEN PILOT HOURS/
223 P208LHRS FOUR HUNDRED AND EIGHTY-EIGHT PILOT HOURS/
224 P209LHRS FOUR HUNDRED AND EIGHTY-NINE PILOT HOURS/
225 P210LHRS FOUR HUNDRED AND NINETY PILOT HOURS/
226 P211LHRS FOUR HUNDRED AND NINETY-ONE PILOT HOURS/
227 P212LHRS FOUR HUNDRED AND NINETY-TWO PILOT HOURS/
228 P213LHRS FOUR HUNDRED AND NINETY-THREE PILOT HOURS/
229 P214LHRS FOUR HUNDRED AND NINETY-FOUR PILOT HOURS/
230 P215LHRS FOUR HUNDRED AND NINETY-FIVE PILOT HOURS/
231 P216LHRS FOUR HUNDRED AND NINETY-SIX PILOT HOURS/
232 P217LHRS FOUR HUNDRED AND NINETY-SEVEN PILOT HOURS/
233 P218LHRS FOUR HUNDRED AND NINETY-EIGHT PILOT HOURS/
234 P219LHRS FOUR HUNDRED AND NINETY-NINE PILOT HOURS/
235 P220LHRS FIVE HUNDRED PILOT HOURS/
236 P221LHRS FIVE HUNDRED AND ONE PILOT HOURS/
237 P222LHRS FIVE HUNDRED AND TWO PILOT HOURS/
238 P223LHRS FIVE HUNDRED AND THREE PILOT HOURS/
239 P224LHRS FIVE HUNDRED AND FOUR PILOT HOURS/
240 P225LHRS FIVE HUNDRED AND FIVE PILOT HOURS/
241 P226LHRS FIVE HUNDRED AND SIX PILOT HOURS/
242 P227LHRS FIVE HUNDRED AND SEVEN PILOT HOURS/
243 P228LHRS FIVE HUNDRED AND EIGHT PILOT HOURS/
244 P229LHRS FIVE HUNDRED AND NINE PILOT HOURS/
245 P230LHRS FIVE HUNDRED AND TEN PILOT HOURS/
246 P231LHRS FIVE HUNDRED AND ELEVEN PILOT HOURS/
247 P232LHRS FIVE HUNDRED AND TWELVE PILOT HOURS/
248 P233LHRS FIVE HUNDRED AND THIRTEEN PILOT HOURS/
249 P234LHRS FIVE HUNDRED AND FOURTEEN PILOT HOURS/
250 P235LHRS FIVE HUNDRED AND FIFTEEN PILOT HOURS/
251 P236LHRS FIVE HUNDRED AND SIXTEEN PILOT HOURS/
252 P237LHRS FIVE HUNDRED AND SEVENTEEN PILOT HOURS/
253 P238LHRS FIVE HUNDRED AND EIGHTEEN PILOT HOURS/
254 P239LHRS FIVE HUNDRED AND NINETEEN PILOT HOURS/
255 P240LHRS FIVE HUNDRED AND TWENTY PILOT HOURS/
256 P241LHRS FIVE HUNDRED AND TWENTY-ONE PILOT HOURS/
257 P242LHRS FIVE HUNDRED AND TWENTY-TWO PILOT HOURS/
258 P243LHRS FIVE HUNDRED AND TWENTY-THREE PILOT HOURS/
259 P244LHRS FIVE HUNDRED AND TWENTY-FOUR PILOT HOURS/
260 P245LHRS FIVE HUNDRED AND TWENTY-FIVE PILOT HOURS/
261 P246LHRS FIVE HUNDRED AND TWENTY-SIX PILOT HOURS/
262 P247LHRS FIVE HUNDRED AND TWENTY-SEVEN PILOT HOURS/
263 P248LHRS FIVE HUNDRED AND TWENTY-EIGHT PILOT HOURS/
264 P249LHRS FIVE HUNDRED AND TWENTY-NINE PILOT HOURS/
265 P250LHRS FIVE HUNDRED AND THIRTY PILOT HOURS/
266 P251LHRS FIVE HUNDRED AND THIRTY-ONE PILOT HOURS/
267 P252LHRS FIVE HUNDRED AND THIRTY-TWO PILOT HOURS/
268 P253LHRS FIVE HUNDRED AND THIRTY-THREE PILOT HOURS/
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272 P257LHRS FIVE HUNDRED AND THIRTY-SEVEN PILOT HOURS/
273 P258LHRS FIVE HUNDRED AND THIRTY-EIGHT PILOT HOURS/
274 P259LHRS FIVE HUNDRED AND THIRTY-NINE PILOT HOURS/
275 P260LHRS FIVE HUNDRED AND FORTY PILOT HOURS/
276 P261LHRS FIVE HUNDRED AND FORTY-ONE PILOT HOURS/
277 P262LHRS FIVE HUNDRED AND FORTY-TWO PILOT HOURS/
278 P263LHRS FIVE HUNDRED AND FORTY-THREE PILOT HOURS/
279 P264LHRS FIVE HUNDRED AND FORTY-FOUR PILOT HOURS/
280 P265LHRS FIVE HUNDRED AND FORTY-FIVE PILOT HOURS/
281 P266LHRS FIVE HUNDRED AND FORTY-SIX PILOT HOURS/
282 P267LHRS FIVE HUNDRED AND FORTY-SEVEN PILOT HOURS/
283 P268LHRS FIVE HUNDRED AND FORTY-EIGHT PILOT HOURS/
284 P269LHRS FIVE HUNDRED AND FORTY-NINE PILOT HOURS/
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290 P275LHRS FIVE HUNDRED AND FIFTY-FIVE PILOT HOURS/
291 P276LHRS FIVE HUNDRED AND FIFTY-SIX PILOT HOURS/
292 P277LHRS FIVE HUNDRED AND FIFTY-SEVEN PILOT HOURS/
293 P278LHRS FIVE HUNDRED AND FIFTY-EIGHT PILOT HOURS/
294 P279LHRS FIVE HUNDRED AND FIFTY-NINE PILOT HOURS/
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300 P285LHRS FIVE HUNDRED AND SIXTY-FIVE PILOT HOURS/
301 P286LHRS FIVE HUNDRED AND SIXTY-SIX PILOT HOURS/
302 P287LHRS FIVE HUNDRED AND SIXTY-SEVEN PILOT HOURS/
303 P288LHRS FIVE HUNDRED AND SIXTY-EIGHT PILOT HOURS/
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309 P294LHRS FIVE HUNDRED AND SIXTY-FOUR PILOT HOURS/
310 P295LHRS FIVE HUNDRED AND SIXTY-FIVE PILOT HOURS/
311 P296LHRS FIVE HUNDRED AND SIXTY-SIX PILOT HOURS/
312 P297LHRS FIVE HUNDRED AND SIXTY-SEVEN PILOT HOURS/
313 P298LHRS FIVE HUNDRED AND SIXTY-EIGHT PILOT HOURS/
314 P299LHRS FIVE HUNDRED AND SIXTY-NINE PILOT HOURS/
315 P300LHRS FIVE HUNDRED AND SEVENTY PILOT HOURS/
316 P301LHRS FIVE HUNDRED AND SEVENTY-ONE PILOT HOURS/
317 P302LHRS FIVE HUNDRED AND SEVENTY-TWO PILOT HOURS/
318 P303LHRS FIVE HUNDRED AND SEVENTY-THREE PILOT HOURS/
319 P304LHRS FIVE HUNDRED AND SEVENTY-FOUR PILOT HOURS/
320 P305LHRS FIVE HUNDRED AND SEVENTY-FIVE PILOT HOURS/
321 P306LHRS FIVE HUNDRED AND SEVENTY-SIX PILOT HOURS/
322 P307LHRS FIVE HUNDRED AND SEVENTY-SEVEN PILOT HOURS/
323 P308LHRS FIVE HUNDRED AND SEVENTY-EIGHT PILOT HOURS/
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329 P314LHRS FIVE HUNDRED AND EIGHTY-FOUR PILOT HOURS/
330 P315LHRS FIVE HUNDRED AND EIGHTY-FIVE PILOT HOURS/
331 P316LHRS FIVE HUNDRED AND EIGHTY-SIX PILOT HOURS/
332 P317LHRS FIVE HUNDRED AND EIGHTY-SEVEN PILOT HOURS/
333 P318LHRS FIVE HUNDRED AND EIGHTY-EIGHT PILOT HOURS/
334 P319LHRS FIVE HUNDRED AND EIGHTY-NINE PILOT HOURS/
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336 P321LHRS FIVE HUNDRED AND NINETY-ONE PILOT HOURS/
337 P322LHRS FIVE HUNDRED AND NINETY-TWO PILOT HOURS/
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343 P328LHRS FIVE HUNDRED AND NINETY-EIGHT PILOT HOURS/
344 P329LHRS FIVE HUNDRED AND NINETY-NINE PILOT HOURS/
345 P330LHRS SIX HUNDRED PILOT HOURS/
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352 P337LHRS SIX HUNDRED AND SEVEN PILOT HOURS/
353 P338LHRS SIX HUNDRED AND EIGHT PILOT HOURS/
354 P339LHRS SIX HUNDRED AND NINE PILOT HOURS/
355 P340LHRS SIX HUNDRED AND TEN PILOT HOURS/
356 P341LHRS SIX HUNDRED AND ELEVEN PILOT HOURS/
357 P342LHRS SIX HUNDRED AND TWELVE PILOT HOURS/
358 P343LHRS SIX HUNDRED AND THIRTEEN PILOT HOURS/
359 P344LHRS SIX HUNDRED AND FOURTEEN PILOT HOURS/
360 P345LHRS SIX HUNDRED AND FIFTEEN PILOT HOURS/
361 P346LHRS SIX HUNDRED AND SIXTEEN PILOT HOURS/
362 P347LHRS SIX HUNDRED AND SEVENTEEN PILOT HOURS/
363 P348LHRS SIX HUNDRED AND EIGHTEEN PILOT HOURS/
364 P349LHRS SIX HUNDRED AND NINETEEN PILOT HOURS/
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366 P351LHRS SIX HUNDRED AND TWENTY-ONE PILOT HOURS/
367 P352LHRS SIX HUNDRED AND TWENTY-TWO PILOT HOURS/
368 P353LHRS SIX HUNDRED AND TWENTY-THREE PILOT HOURS/
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374 P359LHRS SIX HUNDRED AND TWENTY-NINE PILOT HOURS/
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380 P365LHRS SIX HUNDRED AND THIRTY-FIVE PILOT HOURS/
381 P366LHRS SIX HUNDRED AND THIRTY-SIX PILOT HOURS/
382 P367LHRS SIX HUNDRED AND THIRTY-SEVEN PILOT HOURS/
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385 P370LHRS SIX HUNDRED AND FORTY PILOT HOURS/
386 P371LHRS SIX HUNDRED AND FORTY-ONE PILOT HOURS/
387 P372LHRS SIX HUNDRED AND FORTY-TWO PILOT HOURS/
388 P373LHRS SIX HUNDRED AND FORTY-THREE PILOT HOURS/
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393 P378LHRS SIX HUNDRED AND FORTY-EIGHT PILOT HOURS/
394 P379LHRS SIX HUNDRED AND FORTY-NINE PILOT HOURS/
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396 P381LHRS SIX HUNDRED AND FIFTY-ONE PILOT HOURS/
397 P382LHRS SIX HUNDRED AND FIFTY-TWO PILOT HOURS/
398 P383LHRS SIX HUNDRED AND FIFTY-THREE PILOT HOURS/
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407 P392LHRS SIX HUNDRED AND SIXTY-TWO PILOT HOURS/
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409 P394LHRS SIX HUNDRED AND SIXTY-FOUR PILOT HOURS/
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419 P404LHRS SIX HUNDRED AND SEVENTY-FOUR PILOT HOURS/
420 P405LHRS SIX HUNDRED AND SEVENTY-FIVE PILOT HOURS/
421 P406LHRS SIX HUNDRED AND SEVENTY-SIX PILOT HOURS/
422 P407LHRS SIX HUNDRED AND SEVENTY-SEVEN PILOT HOURS/
423 P408LHRS SIX HUNDRED AND SEVENTY-EIGHT PILOT HOURS/
424 P409LHRS SIX HUNDRED AND SEVENTY-NINE PILOT HOURS/
425 P410LHRS SIX HUNDRED AND EIGHTY PILOT HOURS/
426 P411LHRS SIX HUNDRED AND EIGHTY-ONE PILOT HOURS/
427 P412LHRS SIX HUNDRED AND EIGHTY-TWO PILOT HOURS/
428 P413LHRS SIX HUNDRED AND EIGHTY-THREE PILOT HOURS/
429 P414LHRS SIX HUNDRED AND EIGHTY-FOUR PILOT HOURS/
430 P415LHRS SIX HUNDRED AND EIGHTY-FIVE PILOT HOURS/
431 P416LHRS SIX HUNDRED AND EIGHTY-SIX PILOT HOURS/
432 P417LHRS SIX HUNDRED AND EIGHTY-SEVEN PILOT HOURS/
433 P418LHRS SIX HUNDRED AND EIGHTY-EIGHT PILOT HOURS/
434 P419LHRS SIX HUNDRED AND EIGHTY-NINE PILOT HOURS/
435 P420LHRS SIX HUNDRED AND NINETY PILOT HOURS/
436 P421LHRS SIX HUNDRED AND NINETY-ONE PILOT HOURS/
437 P422LHRS SIX HUNDRED AND NINETY-TWO PILOT HOURS/
438 P423LHRS SIX HUNDRED AND NINETY-THREE PILOT HOURS/
439 P424LHRS SIX HUNDRED AND NINETY-FOUR PILOT HOURS/
440 P425LHRS SIX HUNDRED AND NINETY-FIVE PILOT HOURS/
441 P426LHRS SIX HUNDRED AND NINETY-SIX PILOT HOURS/
442 P427LHRS SIX HUNDRED AND NINETY-SEVEN PILOT HOURS/
443 P428LHRS SIX HUNDRED AND NINETY-EIGHT PILOT HOURS/
444 P429LHRS SIX HUNDRED AND NINETY-NINE PILOT HOURS/
445 P430LHRS SIX HUNDRED AND ONE HUNDRED PILOT HOURS/
446 P431LHRS SIX HUNDRED AND ONE HUNDRED AND ONE PILOT HOURS/
447 P432LHRS SIX HUNDRED AND ONE HUNDRED AND TWO PILOT HOURS/
448 P433LHRS SIX HUNDRED AND ONE HUNDRED AND THREE PILOT HOURS/
449 P434LHRS SIX HUNDRED AND ONE HUNDRED AND FOUR PILOT HOURS/
450 P435LHRS SIX HUNDRED AND ONE HUNDRED AND FIVE PILOT HOURS/
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453 P438LHRS SIX HUNDRED AND ONE HUNDRED AND EIGHT PILOT HOURS/
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455 P440LHRS SIX HUNDRED AND ONE HUNDRED AND TEN PILOT HOURS/
456 P441LHRS SIX HUNDRED AND ONE HUNDRED AND ELEVEN PILOT HOURS/
457 P442LHRS SIX HUNDRED AND ONE HUNDRED AND TWELVE PILOT HOURS/
458 P443LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTEEN PILOT HOURS/
459 P444LHRS SIX HUNDRED AND ONE HUNDRED AND FOURTEEN PILOT HOURS/
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475 P460LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY PILOT HOURS/
476 P461LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY-ONE PILOT HOURS/
477 P462LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY-TWO PILOT HOURS/
478 P463LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY-THREE PILOT HOURS/
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480 P465LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY-FIVE PILOT HOURS/
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483 P468LHRS SIX HUNDRED AND ONE HUNDRED AND THIRTY-EIGHT PILOT HOURS/
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485 P470LHRS SIX HUNDRED AND ONE HUNDRED AND FORTY PILOT HOURS/
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487 P472LHRS SIX HUNDRED AND ONE HUNDRED AND FORTY-TWO PILOT HOURS/
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493 P478LHRS SIX HUNDRED AND ONE HUNDRED AND FORTY-EIGHT PILOT HOURS/
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496 P481LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-ONE PILOT HOURS/
497 P482LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-TWO PILOT HOURS/
498 P483LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-THREE PILOT HOURS/
499 P484LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-FOUR PILOT HOURS/
500 P485LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-FIVE PILOT HOURS/
501 P486LHRS SIX HUNDRED AND ONE HUNDRED AND FIFTY-SIX PILOT HOURS/
502 P487LHRS SIX HUNDRED AND ONE HUNDRED AND
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63	9999-9/DTRAPS (0 THRU 75=1) (76 THRU 150=2)
64	{151 THRU 225=3} {301 THRU 375=5} {376 THRU 450=6} {999=9}/
65	226 THRU 300=4 {0=1} {51 THRU 100=2} {101 THRU 150=3}/
66	NTRAPS {0 THRU 200=4} {201 THRU 250=5} {251 THRU 300=6}
67	{151 THRU 200=4} {201 THRU 250=5} {251 THRU 300=6}
68	{301 THRU 350=7} {999=9}
69	DESIGNTR, (1) PILOT (2) INFO/STATUS (1) USN (2) USNR/COMMSRCE,
70	(1) USNA (2) NROTC (3) AOC (4) NSESEF (5) OCS (6) AVROC
71	(1) OTHER SOURCE/RANK
72	{01 (2) 02 (3) 03 (4) 04 (5) 05 (6) 06/YRSSERV (1) 1-4 (2) 5-8
73	{7-20 (6) 21-24 (7) 25-28/YRSLTPY (1) 1-4 (2) 5-8
74	{9-12 (4) 13-16 (5) 17-20 (6) 21-24 (7) 25-28/YRSLTPY (1) 1-4 (2) 5-8
75	{1-3 (4) 4-6 (3) 7-9 (2) 10-12 (5) 13-15 (6) 16-18/PILHRS,
76	{0 THRU 500 (2) 501 THRU 1000 (3) 1001 THRU 1500 (4) 1501 THRU 2000
77	{1501 THRU 2000 (5) 2001 THRU 2500 (6) 2501 THRU 3000
78	{3001 THRU 3500 (7) 3501 THRU 4000 (8) 4001 THRU 4500
79	{4501 THRU 5000 (9) 5001 THRU 5500 (10) 5501 THRU 6000
80	{6001 THRU 6500 (11) 6501 THRU 7000 (12) 7001 THRU 7500
81	{7501 THRU 8000 (13) 8001 THRU 8500 (14) 8501 THRU 9000
82	{9001 THRU 9500 (15) 9501 THRU 10000 (16) 10001 THRU 10500
83	{10501 THRU 11000 (17) 11001 THRU 11500 (18) 11501 THRU 12000
84	{12001 THRU 12500 (19) 12501 THRU 13000 (20) 13001 THRU 13500
85	{13501 THRU 14000 (21) 14001 THRU 14500 (22) 14501 THRU 15000
86	{15001 THRU 15500 (23) 15501 THRU 16000 (24) 16001 THRU 16500
87	{16501 THRU 17000 (25) 17001 THRU 17500 (26) 17501 THRU 18000
88	{18001 THRU 18500 (27) 18501 THRU 19000 (28) 19001 THRU 19500
89	{19501 THRU 20000 (29) 20001 THRU 20500 (30) 20501 THRU 21000
90	{21001 THRU 21500 (31) 21501 THRU 22000 (32) 22001 THRU 22500
91	{22501 THRU 23000 (33) 23001 THRU 23500 (34) 23501 THRU 24000
92	{24001 THRU 24500 (35) 24501 THRU 25000 (36) 25001 THRU 25500
93	{25501 THRU 26000 (37) 26001 THRU 26500 (38) 26501 THRU 27000
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95	{28501 THRU 29000 (41) 29001 THRU 29500 (42) 29501 THRU 30000
96	{30001 THRU 30500 (43) 30501 THRU 31000 (44) 31001 THRU 31500
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103	{40501 THRU 41000 (57) 41001 THRU 41500 (58) 41501 THRU 42000
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110	{51001 THRU 51500 (71) 51501 THRU 52000 (72) 52001 THRU 52500
111	{52501 THRU 53000 (73) 53001 THRU 53500 (74) 53501 THRU 54000
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113	{55501 THRU 56000 (77) 56001 THRU 56500 (78) 56501 THRU 57000
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115	{58501 THRU 59000 (81) 59001 THRU 59500 (82) 59501 THRU 60000
116	{60001 THRU 60500 (83) 60501 THRU 61000 (84) 61001 THRU 61500
117	{61501 THRU 62000 (85) 62001 THRU 62500 (86) 62501 THRU 63000
118	{63001 THRU 63500 (87) 63501 THRU 64000 (88) 64001 THRU 64500
119	{64501 THRU 65000 (89) 65001 THRU 65500 (90) 65501 THRU 66000
120	{66001 THRU 66500 (91) 66501 THRU 67000 (92) 67001 THRU 67500
121	{67501 THRU 68000 (93) 68001 THRU 68500 (94) 68501 THRU 69000
122	{69001 THRU 69500 (95) 69501 THRU 70000 (96) 70001 THRU 70500
123	{70501 THRU 71000 (97) 71001 THRU 71500 (98) 71501 THRU 72000
124	{72001 THRU 72500 (99) 72501 THRU 73000 (100) 73001 THRU 73500
125	{73501 THRU 74000 (101) 74001 THRU 74500 (102) 74501 THRU 75000
126	{75001 THRU 75500 (103) 75501 THRU 76000 (104) 76001 THRU 76500
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128	{78001 THRU 78500 (107) 78501 THRU 79000 (108) 79001 THRU 79500
129	{79501 THRU 80000 (109) 80001 THRU 80500 (110) 80501 THRU 81000
130	{81001 THRU 81500 (111) 81501 THRU 82000 (112) 82001 THRU 82500
131	{82501 THRU 83000 (113) 83001 THRU 83500 (114) 83501 THRU 84000
132	{84001 THRU 84500 (115) 84501 THRU 85000 (116) 85001 THRU 85500
133	{85501 THRU 86000 (117) 86001 THRU 86500 (118) 86501 THRU 87000
134	{87001 THRU 87500 (119) 87501 THRU 88000 (120) 88001 THRU 88500
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139	{94501 THRU 95000 (129) 95001 THRU 95500 (130) 95501 THRU 96000
140	{96001 THRU 96500 (131) 96501 THRU 97000 (132) 97001 THRU 97500
141	{97501 THRU 98000 (133) 98001 THRU 98500 (134) 98501 THRU 99000
142	{99001 THRU 99500 (135) 99501 THRU 100000 (136) 100001 THRU 100500
143	{100501 THRU 101000 (137) 101001 THRU 101500 (138) 101501 THRU 102000
144	{102001 THRU 102500 (139) 102501 THRU 103000 (140) 103001 THRU 103500
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146	{105001 THRU 105500 (143) 105501 THRU 106000 (144) 106001 THRU 106500
147	{106501 THRU 107000 (145) 107001 THRU 107500 (146) 107501 THRU 108000
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149	{109501 THRU 110000 (149) 110001 THRU 110500 (150) 110501 THRU 111000
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153	{115501 THRU 116000 (157) 116001 THRU 116500 (158) 116501 THRU 117000
154	{117001 THRU 117500 (159) 117501 THRU 118000 (160) 118001 THRU 118500
155	{118501 THRU 119000 (161) 119001 THRU 119500 (162) 119501 THRU 120000
156	{120001 THRU 120500 (163) 120501 THRU 121000 (164) 121001 THRU 121500
157	{121501 THRU 122000 (165) 122001 THRU 122500 (166) 122501 THRU 123000
158	{123001 THRU 123500 (167) 123501 THRU 124000 (168) 124001 THRU 124500
159	{124501 THRU 125000 (169) 125001 THRU 125500 (170) 125501 THRU 126000
160	{126001 THRU 126500 (171) 126501 THRU 127000 (172) 127001 THRU 127500
161	{127501 THRU 128000 (173) 128001 THRU 128500 (174) 128501 THRU 129000
162	{129001 THRU 129500 (175) 129501 THRU 130000 (176) 130001 THRU 130500
163	{130501 THRU 131000 (177) 131001 THRU 131500 (178) 131501 THRU 132000
164	{132001 THRU 132500 (179) 132501 THRU 133000 (180) 133001 THRU 133500
165	{133501 THRU 134000 (181) 134001 THRU 134500 (182) 134501 THRU 135000
166	{135001 THRU 135500 (183) 135501 THRU 136000 (184) 136001 THRU 136500
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185	{163501 THRU 164000 (221) 164001 THRU 164500 (222) 164501 THRU 165000
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222	{219001 THRU 219500 (295) 219501 THRU 220000 (296) 220001 THRU 220500
223	{220501 THRU 221000 (297) 221001 THRU 221500 (298) 221501 THRU 222000
224	{222001 THRU 222500 (299) 222501 THRU 223000 (300) 223001 THRU 223500
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226	{225001 THRU 225500 (303) 225501 THRU 226000 (304) 226001 THRU 226500
227	{226501 THRU 227000 (305) 227001 THRU 227500 (306) 227501 THRU 228000
228	{228001 THRU 228500 (307) 228501 THRU 229000 (308) 229001 THRU 229500
229	{229501 THRU 230000 (309) 230001 THRU 230500 (310) 230501 THRU 231000

FREQUENCY DISTRIBUTIONS & HISTOGRAMS

[illegible]

DESIGNTR DESIGNATOR

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
PILOT	1.	40	50.0	50.0	50.0
NFO	2.	40	50.0	50.0	100.0
	TOTAL	80	100.0	100.0	

STATUS STATUS

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CODE
1. I ***** ( 57)
   I USN
   I
2. I ***** ( 23)
   I USNR
   I
   I ..... I ..... I ..... I ..... I ..... I
   I ..... 20 ..... 40 ..... 60 ..... 80 ..... 100
   I
FREQUENCY

MEAN      1.287
MODE      1.000
RANGE     1.000

VALID CASES      80      MISSING CASES      0

          STD ERR      MEDIAN
          STD DEV      VARIANCE
          MINIMUM      MAXIMUM
          0.051        1.202
          0.455        0.207
          1.000        2.000
  
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STATUS	STATUS								
		CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)		
		USN	1.	57	71.2	71.2	71.2		
		USNR	2.	23	28.7	28.7	100.0		
		TOTAL		80	100.0	100.0			

COMMSRCE COMMISSION SOURCE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
USNA	1.	7	8.7	8.7	8.7
NROTC	2.	17	21.2	21.2	30.0
AOCS	3.	44	55.0	55.0	85.0
NESEP	4.	4	5.0	5.0	90.0
OCS	5.	4	5.0	5.0	95.0
AVROC	6.	3	3.7	3.7	98.7
OTHER SOURCE	7.	1	1.2	1.2	100.0
TOTAL		80	100.0	100.0	

RANK

CODE

[illegible]

MEAN	3.300	STD ERR	0.101	MEDIAN	3.211
MODE	3.000	STD DEV	0.906	VARIANCE	0.820
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

RANK	RANK								
		CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)		
01			1.	1	1.2	1.2	1.2		
02			2.	12	15.0	15.0	16.2		
03			3.	38	47.5	47.5	63.7		
04			4.	20	25.0	25.0	88.7		
05			5.	9	11.2	11.2	100.0		
			TOTAL	80	100.0	100.0			

YRSSERV	YEARS OF SERVICE			ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	CATEGORY LABEL	CODE					
	1-4	1.		22	27.5	27.5	27.5
	5-8	2.		25	31.3	31.3	58.7
	9-12	3.		15	18.8	18.8	77.5
	13-16	4.		13	16.2	16.2	93.8
	17-20	5.		4	5.0	5.0	98.7
	21-24	6.		1	1.2	1.2	100.0
		TOTAL		80	100.0	100.0	

YRSFLTPY YEARS OF FLIGHT PAY

CODE

```

1. ***** ( 19)
   I *****
   I 1-3
   I *****
2. ***** ( 24)
   I *****
   I 4-6
   I *****
3. ***** ( 12)
   I *****
   I 7-9
   I *****
4. ***** ( 11)
   I *****
   I 10-12
   I *****
5. ***** ( 11)
   I *****
   I 13-15
   I *****
6. ***** ( 3)
   I *****
   I 16-18
   I *****
   I .....I.....I.....I.....I.....I
   0 .....10.....20.....30.....40.....50
   FREQUENCY

```

MEAN	2.750	STD ERR	0.167	MEDIAN	2.375
MODE	2.000	STD DEV	1.497	VARIANCE	2.241
RANGE	5.000	MINIMUM	1.000	MAXIMUM	6.000
VALID CASES	80	MISSING CASES	0		

YRSFLTYP YRS OF FLIGHT PAY

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
1-3	1.	19	23.7	23.7	23.7
4-6	2.	24	30.0	30.0	53.7
7-9	3.	12	15.0	15.0	68.8
10-12	4.	11	13.7	13.7	82.5
13-15	5.	11	13.7	13.7	96.2
16-18	6.	3	3.7	3.7	100.0
	TOTAL	80	100.0	100.0	

PILHRS FIRST PILOT HOURS

```

CODE
1. I ***** ( 51)
   I 0 THRU 500
   I
2. I ***** ( 13)
   I 501 THRU 1000
   I
3. I ** ( 4)
   I 1001 THRU 1500
   I
4. I ** ( 4)
   I 1501 THRU 2000
   I
5. I ** ( 2)
   I 2001 THRU 2500
   I
6. I ** ( 2)
   I 2501 THRU 3000
   I
7. I ** ( 3)
   I 3001 THRU 3500
   I
9. I ** ( 1)
   I MISSING VALUE
   I
   I ..... I ..... I ..... I ..... I ..... I
   0          20         40         60         80         100
FREQUENCY

```

MEAN	1.962	STD ERR	0.197	MEDIAN	1.284
MODE	1.000	STD DEV	1.761	VARIANCE	3.100
RANGE	8.000	MINIMUM	1.000	MAXIMUM	9.000
VALID CASES	80	MISSING CASES	0		

PILHRS FIRST PILOT HOURS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
0 THRU 500	1.	51	63.7	63.7	63.7
501 THRU 1000	2.	13	16.2	16.2	80.0
1001 THRU 1500	3.	4	5.0	5.0	85.0
1501 THRU 2000	4.	4	5.0	5.0	90.0
2001 THRU 2500	5.	2	2.5	2.5	92.5
2501 THRU 3000	6.	2	2.5	2.5	95.0
3001 THRU 3500	7.	3	3.7	3.7	98.7
MISSING VALUE	9.	1	1.2	1.2	100.0
	TOTAL	80	100.0	100.0	

• • • • •

I ***** (60)

1. I ***** 0 THRU 500 *****

2. I ***** 12
I ***** (THRU 1000

3. $\begin{matrix} I & ** \\ I & \end{matrix} \begin{matrix} 1001 \\ 2 \end{matrix} \begin{matrix} THRU \\ 1500 \end{matrix}$

4. I** I { 501 THRU 2000 2 }

5. I** I 2001 THU 2500

9. I *** { MISSING VALUE 3 }

[illegible]

MEAN	1.625	STD ERR	0.184	MEDIAN	1.167
MODE	1.000	STD DEV	1.649	VARIANCE	2.718
RANGE	8.000	MINIMUM	1.000	MAXIMUM	9.000

VALID CASES	MISSING CASES
80	0

COPHRS COPILOT HOURS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
0 THRU 500	1.	60	75.0	75.0	75.0
501 THRU 1000	2.	12	15.0	15.0	90.0
1001 THRU 1500	3.	2	2.5	2.5	92.5
1501 THRU 2000	4.	2	2.5	2.5	95.0
2001 THRU 2500	5.	1	1.2	1.2	96.2
MISSING VALUE	9.	3	3.7	3.7	100.0
	TOTAL	80	100.0	100.0	

CODE I ***** (46)

CODE

1. I ***** 0 THRU 500 ***** (46)

2. \mathbb{Z}^{12}

I 501 THRU 1000

3. I ***** 1500 9)

4. I **** I 1501 THRU 2000 4

5. I *****
I *****

7. I** I {001 THRU 3500 1}

9. I*** I*** { 2 } SSING VALUE

I.....I.....I.....I.....I.....I.....I

0 10 20 30 40 50

FREQUENCY

MEAN	STD ERR	MEDIAN	1-370
MODE	STD DEV	VARIANCE	3-129
RANGE	MINIMUM	MAXIMUM	9-000

VALID CASES	80	MISSING CASES	0
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SPECRHRS SPECIAL CREW HOURS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
0 THRU 500	1.	46	57.5	57.5	57.5
501 THRU 1000	2.	12	15.0	15.0	72.5
1001 THRU 1500	3.	9	11.2	11.2	83.7
1501 THRU 2000	4.	4	5.0	5.0	88.7
2001 THRU 2500	5.	6	7.5	7.5	96.2
3001 THRU 3500	7.	1	1.2	1.2	97.5
MISSING VALUE	9.	2	2.5	2.5	100.0
	TOTAL	80	100.0	100.0	

MCHRS MISSION COMMANDER HOURS

CODE

1. I ***** (61)
I *****
I 0 THRU 500

2. I *****⁹⁾
I 501 THRU 1060

3. I ** * 4 } 1001 THRU 1500

4. $I^{**} I$ { 501 THRU 2000

5. I ** I { 001 THRU 2500 }¹⁾

6. I I ** I 2501 THRU 3000

8. $\begin{matrix} I & I & I \\ I & I & I \\ I & I & I \end{matrix}$ $\begin{matrix} 2501 \\ 3501 \\ 4501 \end{matrix}$ $\begin{matrix} 1 \\ 1 \\ 1 \end{matrix}$ $\begin{matrix} 2500 \\ 3500 \\ 4000 \end{matrix}$

[illegible]

MEAN	1.550	STD ERR	0.146	MEDIAN	1.156
MODE	1.000	STD DEV	1.301	VARIANCE	1.694
RANGE	7.000	MINIMUM	1.000	MAXIMUM	8.000

VALID CASES	80	MISSING CASES	0
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MCHRS	MISSION	COMMANDER HOURS							
CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)				
0 THRU 500	1.	61	76.2	76.2	76.2				
501 THRU 1000	2.	9	11.2	11.2	87.5				
1001 THRU 1500	3.	4	5.0	5.0	92.5				
1501 THRU 2000	4.	2	2.5	2.5	95.0				
2001 THRU 2500	5.	1	1.2	1.2	96.2				
2501 THRU 3000	6.	2	2.5	2.5	98.7				
3501 THRU 4000	8.	1	1.2	1.2	100.0				
TOTAL		80	100.0	100.0					

DTRAPS NUMBER OF LAY TRAPS

```

CODE
1. I ***** ( 39)
   I 0-75
   I
2. I ***** ( 30)
   I 76-150
   I
3. I ** { 151-225 2)
   I
4. I *** { 226-300 4)
   I
5. I * { 301-375 1)
   I
6. I * { 376-400 1)
   I
9. I *** { MISSING VALUE 3)
   I
   I
   I ..... I ..... I ..... I ..... I ..... I
   0 ..... 10 ..... 20 ..... 30 ..... 40 ..... 50
FREQUENCY

```

MEAN	1.987	STD ERR	0.190	MEDIAN	1.533
MODE	1.000	STD DEV	1.703	VARIANCE	2.899
RANGE	8.000	MINIMUM	1.000	MAXIMUM	9.000
VALID CASES	80	MISSING CASES	0		

DTRAPS	NUMBER OF DAY TRAPS					
CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)	
0-75	1.	39	48.7	48.7	48.7	
76-150	2.	30	37.5	37.5	86.2	
151-225	3.	2	2.5	2.5	88.7	
226-300	4.	4	5.0	5.0	93.8	
301-375	5.	1	1.2	1.2	95.0	
376-400	6.	1	1.2	1.2	96.2	
MISSING VALUE	9.	3	3.7	3.7	100.0	
	TOTAL	80	100.0	100.0		

**** (49)

***** (49)

1.316
1.339
1.300

NTRAPS	NUMBER OF NIGHT TRAPS					
CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)	
0-50	1.	49	61.2	61.2	61.2	
51-100	2.	22	27.5	27.5	88.7	
101-150	3.	2	2.5	2.5	91.2	
151-200	4.	3	3.7	3.7	95.0	
301-350	7.	1	1.2	1.2	96.2	
MISSING VALUE	9.	3	3.7	3.7	100.0	
	TOTAL	80	100.0	100.0		


```
CODE      I ***** ( 40)
1.        I ***** EAST COAST
          I ***** ( 40)
          I ***** WEST COAST
          I .....I.....I.....I.....I
          I .....10.....20.....30.....40.....50
          I .....FREQUENCY
```

85

LOCATION CURRENT LOCATION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
EAST COAST	1.	40	50.0	50.0	50.0
WEST COAST	2.	40	50.0	50.0	100.0
	TOTAL	80	100.0	100.0	

S3A TOURS NUMBER OF S3A SQUADRON TOURS

CODE

I ***** (57)

1. I

I

2. I ***** (18)

2. I**2

3. I*** (5)

3. 3333

I I I I I
0 20 40 60 80 100
FREQUENCY

FREQUENCY

MEAN	1.350	STD. ERR	0.067	MEDIAN	1.202
MODE	1.000	STD. DEV	0.597	VARIANCE	0.357
RANGE	2.000	MINIMUM	1.000	MAXIMUM	3.000

**VARIANCE
MAXIMUM**

3.000

VALID CASES	MISSING CASES	0
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S3A TOURS NUMBER OF S3A SQUADRON TOURS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
1	1.	57	71.2	71.2	71.2
2	2.	18	22.5	22.5	93.8
3	3.	5	6.3	6.3	100.0
	TOTAL	80	100.0	100.0	

OTHCOMM		OTHER OPERATIONAL COMMUNITIES			
CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
RVAH	1.	1	1.2	1.2	1.2
VA	2.	2	2.5	2.5	3.7
VAQ	3.	3	3.7	3.7	7.5
VAW	4.	1	1.2	1.2	8.7
VC	5.	1	1.2	1.2	10.0
VP	6.	1	1.2	1.2	11.2
VQ	7.	4	5.0	5.0	16.2
OTHER	8.	2	2.5	2.5	18.8
NONE	9.	65	81.3	81.3	100.0
	TOTAL	80	100.0	100.0	

DESIGNFO PILOTS-HAVE YOU EVER BEEN DESIG AN NFO?

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	2	2.5	2.5	2.5
NO	2.	39	48.7	48.7	51.2
NOT APPLICABLE	3.	39	48.7	48.7	100.0
	TOTAL	80	100.0	100.0	

NFO TRAIN PILOTS-EVER RECEIVED NFO TRAINING?

[illegible]

MEAN	2.438	STD ERR	0.066	MEDIAN	2.473
MODE	3.000	STD DEV	0.592	VARIANCE	0.350
RANGE	2.000	MINIMUM	1.000	MAXIMUM	3.000
VALID CASES	80	MISSING CASES	0		

NFOTRAIN PILOTS-EVER RECEIVED NFO TRAINING?

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	4	5.0	5.0	5.0
NO	2.	37	46.2	46.2	51.2
NOT APPLICABLE	3.	39	48.7	48.7	100.0
	TOTAL	80	100.0	100.0	

DESIGPIL NFO-HAVE YOU EVER BEEN DESIG A PILOT?

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	2	2.5	2.5	2.5
NO	2.	38	47.5	47.5	50.0
NOT APPLICABLE	3.	40	50.0	50.0	100.0
	TOTAL	80	100.0	100.0	

PILTRAIN NFO-EVER RECEIVED PILOT TRAINING?

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	6	7.5	7.5	7.5
NO	2.	34	42.5	42.5	50.0
NOT APPLICABLE	3.	40	50.0	50.0	100.0
	TOTAL	80	100.0	100.0	

RECCHNGE I AM RECEPTIVE TO CHANGE IN GENERAL

CODE

[illegible]

MEAN	4.275	STD ERR	0.081	MEDIAN	4.344
MODE	5.000	STD DEV	0.729	VARIANCE	0.531
RANGE	2.000	MINIMUM	3.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

RECCHNGE I AM RECEPTIVE TO CHANGE IN GENERAL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NEUTRAL	3.	13	16.2	16.2	16.2
AGREE	4.	32	40.0	40.0	56.3
STRONGLY AGREE	5.	35	43.8	43.8	100.0
	TOTAL	80	100.0	100.0	

COTACEFF COTAC IS EFFECTIVE IN AN ASW MISSION

[illegible]

MEAN	4.737	STD ERR	0.053	MEDIAN	4.833
MODE	5.000	STD DEV	0.470	VARIANCE	0.221
RANGE	2.000	MINIMUM	3.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

COTACEFF COTAC IS EFFECTIVE IN AN ASW MISSION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NEUTRAL	3.	1	1.2	1.2	1.2
AGREE	4.	19	23.7	23.7	25.0
STRONGLY AGREE	5.	60	75.0	75.0	100.0
	TOTAL	80	100.0	100.0	

REDGOOD REDUCTION OF PILOTS IS A GOOD CHANGE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
NEUTRAL	3.	4	5.0	5.0	5.0
AGREE	4.	18	22.5	22.5	27.5
STRONGLY AGREE	5.	58	72.5	72.5	100.0
	TOTAL	80	100.0	100.0	

BEDIMPMO REDUCTION OF PILOTS WILL IMPROVE MORALE

[illegible]

REDIMPMO REDUCTION OF PILOTS WILL IMPROVE MORALE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
DISAGREE	2.	2	2.5	2.5	2.5
NEUTRAL	3.	7	8.7	8.7	11.2
AGREE	4.	19	23.7	23.7	35.0
STRONGLY AGREE	5.	52	65.0	65.0	100.0
	TOTAL	80	100.0	100.0	

PILCOEFF COPILOT IS EFFECTIVE IN AN ASW MISSION

CODE

[illegible]

MEAN	3.225	STD ERR	0.104	MEDIAN	3.184
MODE	3.000	STD DEV	0.927	VARIANCE	0.860
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

PILCOEFF COPILOT IS EFFECTIVE IN AN ASW MISSION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	3	3.7	3.7	3.7
DISAGREE	2.	11	13.7	13.7	17.5
NEUTRAL	3.	38	47.5	47.5	65.0
AGREE	4.	21	26.2	26.2	91.2
STRONGLY AGREE	5.	7	8.7	8.7	100.0
	TOTAL	80	100.0	100.0	

PICOFELR COPILOT IS EFF IN LAUNCHES & RECOVERIES

```

CODE
1. I** (1) STRONGLY DISAGREE
2. I*** (4) DISAGREE
3. I***** (10) NEUTRAL
4. I***** (29) AGREE
5. I***** (36) STRONGLY AGREE
I.....I.....I.....I.....I.....I
0.....10.....20.....30.....40.....50
FREQUENCY

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MEAN	4.188	STD ERR	0.104	MEDIAN	4.362
MODE	5.000	STD DEV	0.929	VARIANCE	0.863
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

PICOEFLR COPILOT IS EFF IN LAUNCHES & RECOVERIES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	1	1.2	1.2	1.2
DISAGREE	2.	4	5.0	5.0	6.3
NEUTRAL	3.	10	12.5	12.5	18.8
AGREE	4.	29	36.2	36.2	55.0
STRONGLY AGREE	5.	36	45.0	45.0	100.0
	TOTAL	80	100.0	100.0	

REDIMEFF REDUCTION WILL IMPROVE EFFECTIVENESS

[illegible]

MEAN	4.175	STD ERR	0.103	MEDIAN	4.333
MODE	5.000	STD DEV	0.925	VARIANCE	0.855
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	80	MISSING CASES	0		

REDIMEFF REDUCTION WILL IMPROVE EFFECTIVENESS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	1	1.2	1.2	1.2
DISAGREE	2.	4	5.0	5.0	6.3
NEUTRAL	3.	10	12.5	12.5	18.8
AGREE	4.	30	37.5	37.5	56.3
STRONGLY AGREE	5.	35	43.8	43.8	100.0
	TOTAL	80	100.0	100.0	

PILTRMCQ PIL TRAIN IN CP POS FOR MC QUALITIES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	2	2.5	2.5	2.5
DISAGREE	2.	10	12.5	12.5	15.0
NEUTRAL	3.	15	18.8	18.8	33.7
AGREE	4.	26	32.5	32.5	66.2
STRONGLY AGREE	5.	27	33.7	33.7	100.0
	TOTAL	80	100.0	100.0	

PILMOREF CONDITIONS WHEN PILOT MORE EFF THAN NFO

[illegible]

PILMOREF CONDITIONS WHEN PILOT MORE EFF THAN NFO

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	5	6.3	6.3	6.3
DISAGREE	2.	11	13.7	13.7	20.0
NEUTRAL	3.	28	35.0	35.0	55.0
AGREE	4.	25	31.3	31.3	86.2
STRONGLY AGREE	5.	11	13.7	13.7	100.0
	TOTAL	80	100.0	100.0	

NFOEFFCO OVERALL THE NFO IS AN EFFECTIVE COPILOT

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
DISAGREE	2.	1	1.2	1.2	1.2
NEUTRAL	3.	6	7.5	7.5	8.7
AGREE	4.	30	37.5	37.5	46.2
STRONGLY AGREE	5.	43	53.7	53.7	100.0
	TOTAL	80	100.0	100.0	

CREFFASW S3A CREW EFF = ASW MISSION PERFORMANCE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	12	15.0	15.6	15.6
DISAGREE	2.	29	36.2	37.7	53.2
NEUTRAL	3.	17	21.2	22.1	75.3
AGREE	4.	11	13.7	14.3	89.6
STRONGLY AGREE	5.	8	10.0	10.4	100.0
MISSING VALUE	9.	3	3.7	MISSING	100.0
	TOTAL	80	100.0	100.0	

Q1.330PT 1.33 PILOTS PER AC IS OPTIMUM QUANTITY

[illegible]

MEAN	3.646	STD ERR	0.126	MEDIAN	3.817
MODE	4.000	STD DEV	1.121	VARIANCE	1.257
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	79	MISSING CASES	1		

Q1.33OPT 1.33 PILOTS PER AC IS OPTIMUM QUANTITY

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	4	5.0	5.1	5.1
DISAGREE	2.	9	11.2	11.4	16.5
NEUTRAL	3.	17	21.2	21.5	38.0
AGREE	4.	30	37.5	38.0	75.9
STRONGLY AGREE	5.	19	23.7	24.1	100.0
MISSING VALUE	9.	1	1.2	MISSING	100.0
	TOTAL	80	100.0	100.0	

• f s • •

5.50

4.244
0.506
5.000

CTACEFLR COTAC IS EFF IN LAUNCHES & RECOVERIES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCI)	ADJUSTED FREQ (PCI)	CUM FREQ (PCI)
DISAGREE	2.	1	1.2	1.2	1.2
NEUTRAL	3.	10	12.5	12.5	13.7
AGREE	4.	39	48.7	48.7	62.5
STRONGLY AGREE	5.	30	37.5	37.5	100.0
	TOTAL	80	100.0	100.0	

JJSINCME JOB SATISFACTION WILL INC MISSION EFF

[illegible]

JSINCME JOB SATISFACTION WILL INC MISSION EFF

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	1	1.2	1.3	1.3
DISAGREE	2.	2	2.5	2.5	3.8
NEUTRAL	3.	7	8.7	8.9	12.7
AGREE	4.	13	16.2	16.5	29.1
STRONGLY AGREE	5.	56	70.0	70.9	100.0
MISSING VALUE	9.	1	1.2	MISSING	100.0
	TOTAL	80	100.0	100.0	

[illegible]

PACEFJS RATIO OF PILOTS PER AC EFFECTS JOB SATIS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STRONGLY DISAGREE	1.	1	1.2	1.3	1.3
DISAGREE	2.	3	3.7	3.8	5.1
NEUTRAL	3.	7	8.7	8.9	13.9
AGREE	4.	22	27.5	27.8	41.8
STRONGLY AGREE	5.	46	57.5	58.2	100.0
MISSING VALUE	9.	1	1.2	MISSING	100.0
	TOTAL	80	100.0	100.0	

SEASHR CURRENTLY ON SEA OR SHORE DUTY?

CODE

1. I ***** (60)

I SEA DUTY

2. I ***** (20)

I SHORE DUTY

I I I I I I
0 20 40 60 80 100
FREQUENCY

MEAN
MODE
RANGE

1.250
1.000
1.000

STD ERR
STD DEV
MINIMUM

0.049
0.436
1.000

MEDIAN
VARIANCE
MAXIMUM

1.167
0.190
2.000

VALID CASES 80

MISSING CASES 0

SEASHR	CURRENTLY ON SEA OR SHORE DUTY?	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
CATEGORY LABEL						
SEA DUTY		1.	60	75.0	75.0	75.0
SHORE DUTY		2.	20	25.0	25.0	100.0
		TOTAL	80	100.0	100.0	

APPENDIX C

CROSTABULATIONS

COTAC IS EFFECTIVE IN AN ASW MISSION BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

	COUNT	REDIMPMO				STRONGLY AGREE	ROW TOTAL
		I	DISAGREE	NEUTRAL	AGREE		
COTACEFF	ROW PCT	I	I	I	I	I	I
	COL PCT	I	I	I	I	I	I
	TOT PCT	I	I	I	I	I	I
	3	2	0	3	4	5	1
NEUTRAL	0.0	I	I	I	I	I	1.3
	0.0	I	I	I	I	I	I
	0.0	I	I	I	I	I	I
	0.0	I	I	I	I	I	I
AGREE	1	I	I	I	I	I	19
	5.3	I	I	I	I	I	23.8
	50.0	I	I	I	I	I	I
	1.2	I	I	I	I	I	I
STRONGLY AGREE	1	I	I	I	I	I	60
	1.7	I	I	I	I	I	75.0
	50.0	I	I	I	I	I	I
	1.2	I	I	I	I	I	I
COLUMN TOTAL	2	I	I	I	I	I	80
	2.5	I	I	I	I	I	100.0
	8.8	I	I	I	I	I	I
	19	I	I	I	I	I	I
	23.8	I	I	I	I	I	I
	65.0	I	I	I	I	I	I
	52	I	I	I	I	I	I

PEARSON'S R = 0.09742 SIGNIFICANCE = 0.1950

REDUCTION OF PILOTS IS A GOOD CHANGE BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

		REDIMPMO					ROW TOTAL
		I	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
COUNT	ROW PCT	I					I
COL PCT	I						
TOT PCT	TOT PCT	I					I
3	3	2	3	4	5	5	
REDGOOD	REDGOOD	0	2	1	1	1	5.0
		0.0	50.0	25.0	25.0	25.0	
		0.0	28.6	5.3	1.9	1.9	
		0.0	2.5	1.2	1.2	1.2	
4	4	1	4	8	5	5	18
AGREE	AGREE	5.6	22.2	44.4	27.8	27.8	22.5
		50.0	57.1	42.1	9.6	9.6	
		1.2	5.0	10.0	6.3	6.3	
5	5	1	1	10	4	4	58
STRONGLY AGREE	STRONGLY AGREE	1.7	1.7	17.2	79.3	79.3	72.5
		50.0	14.3	52.6	88.5	88.5	
		1.2	1.2	12.5	57.5	57.5	
COLUMN TOTAL	COLUMN TOTAL	2	7	19	52	52	80
		2.5	8.8	23.8	65.0	65.0	100.0

PEARSON'S R = 0.47626 SIGNIFICANCE = 0.0000

COPILOT IS EFFECTIVE IN AN ASW MISSION BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

		REDIMPMO					STRONGLY AGREE	ROW TOTAL
		I	DISAGREE	NEUTRAL	AGREE	I		
PILCOEFF	COUNT	I	I	I	I	I	I	I
	ROW PCT COL PCT TOT PCT	1	2	3	4	5	5	5
STRONGLY DISAGREE	1	I	I	I	I	I	I	I
	1	I	I	I	I	I	I	I
	1	I	I	I	I	I	I	I
	1	I	I	I	I	I	I	I
DISAGREE	2	I	I	I	I	I	I	I
	2	I	I	I	I	I	I	I
	2	I	I	I	I	I	I	I
	2	I	I	I	I	I	I	I
NEUTRAL	3	I	I	I	I	I	I	I
	3	I	I	I	I	I	I	I
	3	I	I	I	I	I	I	I
	3	I	I	I	I	I	I	I
AGREE	4	I	I	I	I	I	I	I
	4	I	I	I	I	I	I	I
	4	I	I	I	I	I	I	I
	4	I	I	I	I	I	I	I
STRONGLY AGREE	5	I	I	I	I	I	I	I
	5	I	I	I	I	I	I	I
	5	I	I	I	I	I	I	I
	5	I	I	I	I	I	I	I
COLUMN TOTAL		2	2.5	8.8	19	52	65.0	80
TOTAL		2	2.5	8.8	19	52	65.0	100.0

PEARSON'S R = -0.18291 SIGNIFICANCE = 0.0522

COPILOT IS EFF IN LAUNCHES & RECOVERIES BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

		REDIMPMO					ROW TOTAL
		I	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
PICOEFLR	COUNT ROW PCT COL PCT TOT PCT	I	I	I	I	I	I
STRONGLY DISAGREE	1	2	0	0	0	0	1
		0.0	0.0	0.0	0.0	100.0	1.3
		0.0	0.0	0.0	0.0	1.2	
		0.0	0.0	0.0	0.0	1.2	
DISAGREE	2	0	0	0	0	0	4
		0.0	0.0	0.0	0.0	100.0	5.0
		0.0	0.0	0.0	0.0	7.7	
		0.0	0.0	0.0	0.0	5.0	
NEUTRAL	3	0	0	0	1	0	10
		0.0	0.0	0.0	10.0	90.0	12.5
		0.0	0.0	0.0	5.3	17.3	
		0.0	0.0	0.0	1.2	11.2	
AGREE	4	2	6.9	3	9	15	29
		100.0	10.3	10.3	31.0	51.7	36.3
		2.5	42.9	3.7	47.4	28.8	
			3.7	11.2	11.2	18.8	
STRONGLY AGREE	5	0	0	4	9	23	36
		0.0	0.0	11.1	25.0	63.9	45.0
		0.0	0.0	57.1	47.4	44.2	
		0.0	0.0	5.0	11.2	28.7	
COLUMN TOTAL		2	2.5	7	19	52	80
		2.5	8.8	23.8	65.0	100.0	

PEARSON'S R = -0.15514 SIGNIFICANCE = 0.0847

REDUCTION WILL IMPROVE EFFECTIVENESS BY
REDUCTION OF PILOTS WILL IMPROVE MOKALE

REDINEFF	COUNT ROW PCT COL PCT TOT PCT	REDIMPHO					ROW TOTAL
		DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE		
STRONGLY DISAGREE	1	0	0	0	1	1	1
		0.0	0.0	0.0	100.0	1	1.3
		0.0	0.0	0.0	1.2	1	
DISAGREE	2	0	2	1	1	1	4
		0.0	50.0	25.0	25.0	1	5.0
		0.0	28.6	5.3	1.2	1	
NEUTRAL	3	2	2	6	0	1	10
		20.0	20.0	60.0	0.0	0	12.5
		100.0	28.6	31.6	0.0	0	
AGREE	4	0	3	11	16	1	30
		0.0	10.0	36.7	53.3	1	37.5
		0.0	42.9	57.9	30.8	1	
STRONGLY AGREE	5	0	0	1	34	1	35
		0.0	0.0	2.9	97.1	1	43.8
		0.0	0.0	5.3	65.4	1	
COLUMN TOTAL		2	7	19	52	1	80
		2.5	8.8	23.8	65.0	1	100.0

PEARSON'S R = 0.57100 SIGNIFICANCE = 0.0000

CONDITIONS WHEN PILOT MORE EFF THAN NFO BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

	COUNT	REDIMPMO				AGREE	NEUTRAL	DISAGREE	STRONGLY AGREE	ROW TOTAL
		I	I	I	I					
PILMOREF	ROW PCT COL PCT TOT PCT	I	I	I	I	I	I	I	I	I
STRONGLY DISAGREE	1	2	1	3	4	5				5
		20.0	40.0	0.0	0.0	40.0				6.3
		50.0	28.6	0.0	0.0	3.8				
		1.2	2.5	0.0	0.0	2.5				
DISAGREE	2	0	0	0	2	9				11
		0.0	0.0	0.0	18.2	81.8				13.8
		0.0	0.0	0.0	10.5	17.3				
		0.0	0.0	0.0	2.5	11.2				
NEUTRAL	3	1	4	4	8	15				28
		3.6	14.3	14.3	28.6	53.6				35.0
		50.0	57.1	57.1	42.1	28.8				
		1.2	5.0	5.0	10.0	18.8				
AGREE	4	0	0	0	6	19				25
		0.0	0.0	0.0	24.0	76.0				31.3
		0.0	0.0	0.0	31.6	36.5				
		0.0	0.0	0.0	7.5	23.7				
STRONGLY AGREE	5	0	1	3	3	7				11
		0.0	9.1	27.3	27.3	63.6				13.8
		0.0	14.3	15.8	15.8	13.5				
		0.0	1.2	3.7	3.7	8.7				
COLUMN TOTAL		2	7	7	19	52				80
		2.5	8.8	8.8	23.8	65.0				100.0

PEARSON'S R = 0.19534 SIGNIFICANCE = 0.0412

OVERALL THE NFO IS AN EFFECTIVE COPILOT BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

	REDIMPMO					COUNT ROW PCT COL PCT TOT PCT	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	ROW TOTAL
	I	I	I	I	I						
FOEFCO	2	0	0	3	1	6	5	4	3	1	1
DISAGREE	1.3	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	1.3
NEUTRAL	6	0	0	1	1	3	2	3	16.7	1	6
	7.5	0.0	0.0	14.3	1.2	33.8	33.8	50.0	15.8	3.7	7.5
AGREE	30	3	3	3	1	18	18	8	10.0	0	30
	37.5	50.0	1.2	42.9	3.7	60.0	60.0	26.7	42.1	10.0	37.5
STRONGLY AGREE	43	1	3	3	1	31	31	8	7.0	0	43
	53.8	2.3	50.0	42.9	3.7	72.1	72.1	18.6	42.1	10.0	53.8
COLUMN TOTAL	80	2	5	7	2	52	52	19	8.8	19	80
	100.0	2.5	62.5	8.8	2.5	65.0	65.0	23.8	11.0	23.8	100.0

COTAC IS EFF IN LAUNCHES & RECOVERIES BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

	COUNT	REDIMPMO				AGREE	NEUTRAL	DISAGREE	STRONGLY AGREE	ROW TOTAL
		I	I	I	I					
CTACEFLR	ROW PCT COL PCT TOT PCT	I	I	I	I	I	I	I	I	I
DISAGREE	2	2	0	0	3	4	0	0	5	1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	
NEUTRAL	3	0	0	0	1	2	10	20	7	10
		0.0	0.0	0.0	10.0	20.0	10.0	70.0	13.5	12.5
		0.0	0.0	0.0	14.3	10.5	10.5	13.5	8.7	
		0.0	0.0	0.0	1.2	2.5	2.5	8.7		
AGREE	4	1	2	6	4	10	10	25	24	39
		2.6	50.0	1.2	10.3	25.6	52.6	61.5	46.2	48.8
		50.0	1.2	1.2	57.1	52.6	12.5	46.2	30.0	
		1.2	1.2	1.2	5.0	12.5	12.5	30.0		
STRONGLY AGREE	5	1	3	3	2	7	6	23	20	30
		3.3	50.0	1.2	6.7	23.3	36.8	66.7	38.5	37.5
		50.0	1.2	1.2	28.6	36.8	8.7	38.5	25.0	
		1.2	1.2	1.2	2.5	8.7	8.7	25.0		
COLUMN TOTAL		2	2	2	7	19	8	52	65	80
		2.5	2.5	2.5	8.8	23.8	8.8	65.0		100.0

PEARSON'S R = -0.02858 SIGNIFICANCE = 0.4007

DESIGNATOR BY
CONDITIONS WHEN PILOT MORE EFF THAN NFO

DESIGNTR	COUNT COL PCT TOT PCT	PILMOREF					AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	ROW TOTAL
		I	I	I	I	I						
PILOT	1	I	I	I	I	I	I	3	I	I	I	I
		1	1	1	1	1	4	11	17	7	40	
		2.5	2.5	2.5	2.5	2.5	10.0	27.5	42.5	17.5	50.0	
		20.0	20.0	20.0	20.0	20.0	36.4	39.3	68.0	63.6		
NFO	2	I	I	I	I	I	5.0	13.7	I	I	I	I
		4	4	4	4	4	7	17	8	4	40	
		10.0	10.0	10.0	10.0	10.0	17.5	42.5	20.0	10.0	50.0	
		80.0	80.0	80.0	80.0	80.0	63.6	60.7	32.0	36.4		
COLUMN TOTAL		I	I	I	I	I	8.7	21.2	I	I	I	I
		5	5	5	5	5	11	28	25	11	80	
		6.3	6.3	6.3	6.3	6.3	13.8	35.0	31.3	13.8	100.0	

ETA = 0.31548 WITH DESIGNTR DEPENDENT.

= 0.28044 WITH PILMOREF DEPENDENT.

ETA = 0.31548 WITH DESIGNTR DEPENDENT.

= 0.28044 WITH PILMOREF DEPENDENT.

RANK BY

COTAC IS EFF IN LAUNCHES & RECOVERIES

RANK	COUNT ROW PCT COL PCT TOT PCT	CTACEFLR					ROW TOTAL
		I	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
01	1	I	2	3	I	4	1
		I	0	0	I	0	1.3
		I	0.0	0.0	I	0.0	
		I	0.0	0.0	I	0.0	
		I	0.0	0.0	I	0.0	
02	2	I	0	0	I	4	12
		I	0.0	0.0	I	33.3	15.0
		I	0.0	0.0	I	10.3	
		I	0.0	0.0	I	5.0	
03	3	I	1	5	I	19	38
		I	2.6	13.2	I	50.0	47.5
		I	100.0	50.0	I	48.7	
		I	1.2	6.3	I	23.7	
04	4	I	0	4	I	11	20
		I	0.0	20.0	I	55.0	25.0
		I	0.0	40.0	I	28.2	
		I	0.0	5.0	I	13.7	
05	5	I	0	1	I	5	9
		I	0.0	11.1	I	55.6	11.3
		I	0.0	10.0	I	12.8	
		I	0.0	1.2	I	6.3	
COLUMN TOTAL		I	1	10	I	39	80
		I	1.3	12.5	I	48.8	100.0

ETA = 0.24354 WITH RANK DEPENDENT. = 0.30535 WITH CTACEFLR DEPENDENT.

YEARS OF SERVICE BY
REDUCTION OF PILOTS IS A GOOD CHANGE

YR SERV	COUNT		REDGOOD			AGREE	STRONGLY AGREE	ROW TOTAL
	ROW COL TOT	PCT PCT PCT	I	NEUTRAL	I			
1-4	1			3			5	22
				1		5	16	27.5
			4.5			22.7	72.7	
			25.0			27.8	27.6	
5-8	2		1.2			6.3	20.0	25
				1		5	19	31.3
			4.0			20.0	76.0	
			25.0			27.8	32.8	
9-12	3		1.2			6.3	23.7	15
				0		3	12	18.8
			0.0			20.0	80.0	
			0.0			16.7	20.7	
13-16	4		0.0			3.7	15.0	13
				2		5	6	16.3
			15.4			38.5	46.2	
			50.0			27.8	10.3	
17-20	5		2.5			6.3	7.5	4
				0		0	4	5.0
			0.0			0.0	100.0	
			0.0			0.0	6.9	
21-24	6		0.0			0.0	5.0	1
				0		0	1	1.3
			0.0			0.0	100.0	
			0.0			0.0	1.7	
COLUMN TOTAL			4	5.0	18	58	80	100.0

ETA = 0.05809 WITH YRSSERV DEPENDENT. = 0.31701 WITH REDGOOD DEPENDENT.

YEARS OF SERVICE BY

REDUCTION OF PILOTS WILL IMPROVE MORALE

YRSSERV	REDIMPMO					STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	COUNT ROW PCT COL PCT TOT PCT	ROW TOTAL
	I	I	I	I	I						
1-4	1	2	3	4	5	I	I	I	I	I	22 27.5
5-8	2	1	0	6	18	I	I	I	I	I	25 31.3
9-12	3	0	3	2	10	I	I	I	I	I	15 18.8
13-16	4	1	4	3	5	I	I	I	I	I	13 16.3
17-20	5	0	0	0	4	I	I	I	I	I	4 5.0
21-24	6	0	0	0	1	I	I	I	I	I	1 1.3
COLUMN TOTAL	2	2.5	8.8	19	52	I	I	I	I	I	80 100.0

ETA = 0.32506 WITH YRSSERV DEPENDENT.

= 0.37538 WITH REDIMPMO DEPENDENT.

YEARS OF SERVICE BY
PIL TRAIN IN CP PJS FOR MC QUALITIES

YRSSERV	COUNT ROW PCT COL PCT TOT PCT	PILTRMCQ					AGREE	STRONGLY AGREE	ROW TOTAL
		I	STRONGLY DISAGRE	DISAGREE	NEUTRAL	I			
1-4	1	I	1	2	3	I	4	5	I
		I	2	3	4	I	7	6	I
		I	9.1	13.6	18.2	I	31.8	27.3	I
		I	100.0	30.0	26.7	I	26.9	22.2	I
		I	2.5	3.7	5.0	I	8.7	7.5	I
5-8	2	I	0	2	2	I	12	9	I
		I	0.0	8.0	8.0	I	48.0	36.0	I
		I	0.0	20.0	13.3	I	46.2	33.3	I
		I	0.0	2.5	2.5	I	15.0	11.2	I
9-12	3	I	0	3	6	I	3	3	I
		I	0.0	20.0	40.0	I	20.0	20.0	I
		I	0.0	30.0	40.0	I	11.5	11.1	I
		I	0.0	3.7	7.5	I	3.7	3.7	I
13-16	4	I	0	2	1	I	2	8	I
		I	0.0	15.4	7.7	I	15.4	61.5	I
		I	0.0	20.0	6.7	I	7.7	29.6	I
		I	0.0	2.5	1.2	I	2.5	10.0	I
17-20	5	I	0	0	2	I	2	0	I
		I	0.0	0.0	50.0	I	50.0	0.0	I
		I	0.0	0.0	13.3	I	7.7	0.0	I
		I	0.0	0.0	2.5	I	2.5	0.0	I
21-24	6	I	0	0	0	I	0	1	I
		I	0.0	0.0	0.0	I	0.0	100.0	I
		I	0.0	0.0	0.0	I	0.0	3.7	I
		I	0.0	0.0	0.0	I	0.0	1.2	I
COLUMN TOTAL	2.5	10	12.5	15	18.8	26	32.5	27	80
								33.8	100.0

ETA = 0.23671 WITH YRSSERV DEPENDENT. = 0.32883 WITH PILTRMCQ DEPENDENT.

YEARS OF SERVICE BY

JOB SATISFACTION WILL INC. MISSION EFF.

YR SERV	COUNT ROW PCT COL PCT TOT PCT	JSINCME					AGREE	STRONGLY AGREE	ROW TOTAL
		I I I I	STRONGLY DISAGREE	DISAGREE	NEUTRAL	I I I I			
1-4	1	I I I I	I 0 0 0	2 0 0 0	I 1 4 1	I I I I	I 4 18 30 5	I 17 77 30 21	22 27.8
5-8	2	- I I I I	- I 0 0 0	- 0 0 0	- I 12 42 3	- I I I I	- I 6 25 46 7	- I 15 62 26 19	24 30.4
9-12	3	- I I I I	- I 0 0 0	- 0 0 0	- I 2 13 28 2	- I I I I	- I 1 6 7 1	- I 12 80 21 15	15 19.0
13-16	4	- I I I I	- I 7 100 1	- 2 15 100 2	- I 1 7 14 1	- I I I I	- I 2 15 15 2	- I 7 53 12 8	13 16.5
17-20	5	- I I I I	- I 0 0 0	- 0 0 0	- I 0 0 0	- I I I I	- I 0 0 0	- I 4 100 7 5	4 5.1
21-24	6	- I I I I	- I 0 0 0	- 0 0 0	- I 0 0 0	- I I I I	- I 0 0 0	- I 1 100 1 1	1 1.3
COLUMN TOTAL		- I 1 1.3	- I 2 2.5	- I 7 8.9	- I 13 16.5	- I 56 70.9	- I 79 100.0		

MISSION COMMANDER HOURS BY
REDUCTION OF PILOTS WILL IMPROVE MORALE

MCHRS	COUNT ROW PCT COL PCT TOT PCT	REDIMPMO				STRONGLY AGREE	ROW TOTAL
		DISAGREE	NEUTRAL	AGREE			
0 THRU 500	1	1	3	4	15	41	61
		1.6	6.6	24.6	67.2	78.8	76.3
		50.0	57.1	78.9	78.8	51.2	
		1.2	5.0	18.8	51.2		
501 THRU 1000	2	0	1	3	33.3	55.6	9
		0.0	11.1	33.3	55.6	9.6	11.3
		0.0	14.3	15.8	9.6	6.3	
		0.0	1.2	3.7	6.3		
1001 THRU 1500	3	0	2	0	50.0	2	4
		0.0	50.0	0.0	50.0	2	5.0
		0.0	28.6	0.0	3.8	2.5	
		0.0	2.5	0.0	2.5		
1501 THRU 2000	4	0	0	1	50.0	1	2
		0.0	0.0	50.0	50.0	1	2.5
		0.0	0.0	5.3	1.9	1.2	
		0.0	0.0	1.2	1.2		
2001 THRU 2500	5	1	0	0	0.0	0.0	1
		100.0	0.0	0.0	0.0	0.0	1.3
		50.0	0.0	0.0	0.0	0.0	
		1.2	0.0	0.0	0.0	0.0	
2501 THRU 3000	6	0	0	0	0.0	2	2
		0.0	0.0	0.0	0.0	100.0	2.5
		0.0	0.0	0.0	3.8	2.5	
		0.0	0.0	0.0	2.5		
3501 THRU 4000	8	0	0	0	0.0	1	1
		0.0	0.0	0.0	100.0	1.9	1.3
		0.0	0.0	0.0	1.2		
		0.0	0.0	0.0			
COLUMN TOTAL		2.5	8.8	19	65.0	80	100.0

ETA = 0.20162 WITH MCHRS DEPENDENT. = 0.42604 WITH REDIMPMO DEPENDENT.

MISSION COMMANDER HOURS BY
JOB SATISFACTION WILL INC MISSION EFF

MCHRS	COUNT ROW PCT COL PCT TOT PCT	JSINCME					ROW TOTAL
		I STRONGLY DISAGRE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
0 THRU 500	1	1	2	3	4	5	
		0	1	5	10	44	60
		0.0	1.7	8.3	16.7	73.3	75.9
		0.0	50.0	71.4	76.9	78.6	
		0.0	1.3	6.3	12.7	55.7	
501 THRU 1000	2	0	0	0	3	6	9
		0.0	0.0	0.0	33.3	66.7	11.4
		0.0	0.0	0.0	23.1	10.7	
		0.0	0.0	0.0	3.8	7.6	
1001 THRU 1500	3	1	0	1	0	2	4
		25.0	0.0	25.0	0.0	50.0	5.1
		100.0	0.0	14.3	0.0	3.9	
		1.3	0.0	1.3	0.0	2.5	
1501 THRU 2000	4	0	0	1	0	1	2
		0.0	0.0	50.0	0.0	50.0	2.5
		0.0	0.0	14.3	0.0	1.8	
		0.0	0.0	1.3	0.0	1.3	
2001 THRU 2500	5	0	1	0	0	0	1
		0.0	100.0	0.0	0.0	0.0	1.3
		0.0	50.0	0.0	0.0	0.0	
		0.0	1.3	0.0	0.0	0.0	
2501 THRU 3000	6	0	0	0	0	2	2
		0.0	0.0	0.0	0.0	100.0	2.5
		0.0	0.0	0.0	0.0	3.9	
		0.0	0.0	0.0	0.0	2.5	
3501 THRU 4000	8	0	0	0	0	1	1
		0.0	0.0	0.0	0.0	100.0	1.3
		0.0	0.0	0.0	0.0	1.8	
		0.0	0.0	0.0	0.0	1.3	
COLUMN TOTAL		1	2	7	13	56	79
		1.3	2.5	8.9	16.5	70.9	100.0

ETA = 0.24217 WITH MCHRS DEPENDENT.
NUMBER OF MISSING OBSERVATIONS = 1
= 0.46533 WITH JSINCME DEPENDENT.

MISSION COMMANDER HOURS BY
RATIO OF PILOTS PER AC EFFECTS JOB SATIS

MCHRS	COUNT ROW PCT COL PCT TOT PCT	PACEFJS					AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	ROW TOTAL
		I	I	I	I	I						
0 THRU 500	1	1	1	1	1	1	1	3	2	1	4	60
		0.0	0.0	0.0	0.0	0.0	15	10.0	3.3	1	37	75.9
		0.0	0.0	66.7	2.5	0.0	25.0	85.7	0.0	0.0	61.7	
		0.0	0.0	0.0	0.0	0.0	19.0	7.6	0.0	0.0	80.4	
501 THRU 1000	2	1	1	1	1	1	5	0	0	0	4	9
		0.0	0.0	0.0	0.0	0.0	55.6	0.0	0.0	0.0	44.4	11.4
		0.0	0.0	0.0	0.0	0.0	22.7	0.0	0.0	0.0	8.7	
		0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	5.1	
1001 THRU 1500	3	1	1	1	1	1	0	1	1	0	2	4
		0.0	0.0	25.0	3.3	0.0	0.0	25.0	0.0	0.0	50.0	5.1
		0.0	0.0	33.3	1.3	0.0	0.0	14.3	0.0	0.0	4.3	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	
1501 THRU 2000	4	1	1	1	1	1	2	0	0	0	0	2.5
		0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
		0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	
		0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	
2001 THRU 2500	5	1	1	1	1	1	0	0	0	0	0	1.3
		100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2501 THRU 3000	6	1	1	1	1	1	0	0	0	0	2	2.5
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	
3501 THRU 4000	8	1	1	1	1	1	0	0	0	0	1	1.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	
COLUMN TOTAL		1	1.3	3.8	3	7	22	8.9	3	22	46	79
		1.3	3.8	3.8	3	7	27.8	8.9	3	27.8	58.2	100.0

ETA = 0.30582 WITH MCHRS DEPENDENT. = 0.48596 WITH PACEFJS DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 1

NUMBER OF S-3A SQUADRON TOURS BY
JOB SATISFACTION WILL INC MISSION EFF

		JSINCME							
S3ATOURS	COUNT ROW PCT COL PCT TOT PCT	I	I STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	ROW TOTAL	
1	1	I	I	2	I	I	I	I	I
		0	0	0	6	10	40	56	
		0.0	0.0	0.0	10.7	17.9	71.4	70.9	
		0.0	0.0	0.0	85.7	76.9	71.4		
		0.0	0.0	0.0	7.6	12.7	50.6		
2	2	I	I	2	I	I	I	18	
		1	11.1	1	1	3	11	22.8	
		5.6	100.0	5.6	5.6	16.7	61.1		
		100.0	2.5	14.3	14.3	23.1	19.6		
		1.3	0.0	1.3	1.3	3.8	13.9		
3	3	I	I	0	I	I	I	5	
		0	0	0	0	0	5	6.3	
		0.0	0.0	0.0	0.0	0.0	100.0		
		0.0	0.0	0.0	0.0	0.0	8.9		
		0.0	0.0	0.0	0.0	0.0	6.3		
COLUMN TOTAL		1	2.5	2	7	13	56	79	
		1.3			8.9	16.5	70.9	100.0	

ETA = 0.25223 WITH S3ATOURS DEPENDENT.

NUMBER OF MISSING OBSERVATIONS = 1

= 0.25716 WITH JSINCME DEPENDENT.

CURRENTLY ON SEA OR SHORE DUTY? BY
 JOB SATISFACTION WILL INC MISSION EFF

		JSINCME						
COUNT	ROW PCT COL PCT TOT PCT	I	I STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	ROW TOTAL
SEASHR	1	I	I	2	I	I	I	I
SEA DUTY	1	I	I	0	I	I	I	59
		I	1.7	0.0	3	8	47	74.7
		I	100.0	0.0	5.1	13.6	79.7	
		I	1.3	0.0	42.9	61.5	83.9	
		I		0.0	3.8	10.1	59.5	
SHORE DUTY	2	I	I	2	I	I	I	20
		I	0	10.0	.4	5	9	25.3
		I	0.0	100.0	20.0	25.0	45.0	
		I	0.0	2.5	57.1	38.5	16.1	
		I	0.0	2.5	5.1	6.3	11.4	
COLUMN TOTAL	1	I	I	2	I	I	I	79
		I	1.3	2.5	7	13	56	100.0

ETA = 0.41657 WITH SEASHR DEPENDENT.
 NUMBER OF MISSING OBSERVATIONS = 1
 = 0.32820 WITH JSINCME DEPENDENT.

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